FILE 'HCAPLUS' ENTERED AT 11:57:49 ON 30 MAR 2004
ACT LEVY92068/A

L1 (1) SEA FILE=REGISTRY ABB=ON PLU=ON "TRANS-8,TRANS-10-DODEC

L1 (1) SEA FILE=REGISTRY ABB=ON PLU=ON "TRANS-8,TRANS-10-DODEC ADIEN-1-OL"/CN
L2 (6) SEA FILE=REGISTRY ABB=ON PLU=ON (16974-11-1 OR 2077-10-8 OR 33189-72-9 OR 33956-49-9 OR 40642-40-8 OR 53120-26-6 OR 53120-27-7)/RN
L3 (1) SEA FILE=REGISTRY ABB=ON PLU=ON 20711-10-8/RN
L4 (7) SEA FILE=REGISTRY ABB=ON PLU=ON L2 OR L3
L5 (1) SEA FILE=REGISTRY ABB=ON PLU=ON "(Z)-11-TETRADECENYL ACETATE"/CN
L6 (1) SEA FILE=REGISTRY ABB=ON PLU=ON "(E)-11-TETRADECENYL ACETATE"/CN
L7 (1) SEA FILE=REGISTRY ABB=ON PLU=ON "(Z)-8-DODECENYL ACETATE"/CN
L8 (1) SEA FILE=REGISTRY ABB=ON PLU=ON "(E)-8-DODECENYL ACETATE"/CN
L9 (1) SEA FILE=REGISTRY ABB=ON PLU=ON "(Z)-8-DODECEN-1-OL"/CN
L10 (1) SEA FILE=REGISTRY ABB=ON PLU=ON "(Z,Z)-3,13-OCTADECADIEN-1-YL ACETATE"/CN
L11 (1) SEA FILE=REGISTRY ABB=ON PLU=ON "(E,Z)-3,13-OCTADECADIEN-1-OL ACETATE"/CN
L12 (1) SEA FILE=REGISTRY ABB=ON PLU=ON "(Z)-9-DODECENYL ACETATE"/CN
L13 (9) SEA FILE=REGISTRY ABB=ON PLU=ON L1 OR L2 OR L3 OR L4 OR L5 OR L6 OR L7 OR L8 OR L9 OR L10 OR L11 OR L12
L14 (1101) SEA FILE=HCAPLUS ABB=ON PLU=ON L13
L15 (1) SEA FILE=REGISTRY ABB=ON PLU=ON WATER/CN
L16 (518) SEA FILE=HCAPLUS ABB=ON PLU=ON TRANS(W)8(W)TRANS(W)10(W)D!DECAD? OR ((E OR Z)(W)8(W)DODEC? OR (E OR Z)(W)Z(W)3(W)13(W)(OCTADEC? OR OCTA DEC?) OR (E OR Z)(W)11(W)(TETRADEC? OR TETRA DEC?) OR Z(W)9(W)DODEC?)(3A)ACETATE OR Z 8 DODECEN?
L17 36 SEA FILE=HCAPLUS ABB=ON PLU=ON (L14 OR L16) AND (L15 OR WATER OR H2O)

L17 ANSWER 1 OF 36 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 14 Dec 2003
ACCESSION NUMBER: 2003:971954 HCAPLUS
DOCUMENT NUMBER: 140:28456
TITLE: Method of encapsulating hydrophobic organic molecules in polyurea capsules
INVENTOR(S): Stover, Harald D. H.; Li, Wen-Hui; Croll, Lisa M.; Shulkin, Anna
PATENT ASSIGNEE(S): McMaster University, Can.
SOURCE: PCT Int. Appl., 61 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003101606	A1	20031211	WO 2003-CA817	20030602

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2002-384137P P 20020531

AB It is known to encapsulate various materials in polyurea microcapsules, but obtaining satisfactory microcapsules incorporating alc. materials has proven difficult. A process has now been found where polyurea microcapsules are formed by interfacial polymerization between an aqueous phase and a **water**-immiscible phase, and properties, particularly the solubility parameters, of the **water** immiscible phase are closely matched to corresponding properties of the polyurea. Microcapsules prepared by this process have improved stability, mech. strength and controlled release properties. Thus, 2.5 g Mondur ML in a mixture of 20 mL 1-dodecanol and 80 mL Bu acetate and 1.03 g diethylene triamine in 50 mL **water** were interfacially polymerized to give a microcapsule containing 1-dodecanol and Bu acetate.

IT **20711-10-8 28079-04-1 33956-49-9 40642-40-8**
RL: MSC (Miscellaneous)
(microcapsule containing; method of encapsulating hydrophobic organic mols. in polyurea capsules)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 2 OF 36 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 01 Nov 2002
ACCESSION NUMBER: 2002:832534 HCAPLUS
DOCUMENT NUMBER: 137:329448
TITLE: Controlled-release particles comprising inorganic matrix
INVENTOR(S): Anderson, Mark T.; Budd, Kenneth D.; Marabella, Charles P.; Nigatu, Tadesse G.
PATENT ASSIGNEE(S): 3M Innovative Properties Company, USA
SOURCE: PCT Int. Appl., 38 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

WO 2002085113 A1 20021031 WO 2002-US8969 20020322
W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
US 2003031694 A1 20030213 US 2001-920689 20010802
EP 1392115 A1 20040303 EP 2002-764149 20020322
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
PRIORITY APPLN. INFO.: US 2001-838854 A 20010420
US 2001-920689 A 20010802
WO 2002-US8969 W 20020322

AB A particle that includes an inorg. matrix that comprises channels and a composition disposed in the channels, the composition including organic structure-directing agent and active agent, for example, pheromone, and the particle being capable of controllably releasing the active agent are disclosed.

IT **7732-18-5, Water,** uses
RL: NUU (Other use, unclassified); USES (Uses)
(controlled-release particles comprising inorg. matrix)

IT **16974-11-1, Z-9 Dodecenyl acetate 20711-10-8 28079-04-1, Z-8-Dodecenyl acetate 33189-72-9 33956-49-9, trans-8,Trans-10-Dodecadien-1-ol 38363-29-0, E-8-Dodecenyl acetate 40642-40-8, Z-8-Dodecen-1-ol 53120-26-6, (E,Z)-3,13-Octadecadienyl acetate 53120-27-7, (Z,Z)-3,13-Octadecadienyl acetate**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(controlled-release particles comprising inorg. matrix)

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 3 OF 36 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 24 Jul 2000
ACCESSION NUMBER: 2000:497525 HCAPLUS
DOCUMENT NUMBER: 133:218810
TITLE: Comparison of pheromone application rates, point source densities, and dispensing methods for mating disruption of tufted apple bud moth (Lepidoptera: Tortricidae)
AUTHOR(S): Meissner, Heike E.; Atterholt, Cynthia A.; Walgenbach, James F.; Kennedy, George G.
CORPORATE SOURCE: Department of Entomology, Mountain Horticultural

Crops Research & Extension Center, North Carolina State University, Fletcher, NC, 28732, USA

SOURCE: Journal of Economic Entomology (2000), 93(3), 820-827
CODEN: JEENAI; ISSN: 0022-0493
PUBLISHER: Entomological Society of America
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Small-plot (≈0.1 ha) studies were used to evaluate different pheromone dispensing systems, application rates, and point-source densities for mating disruption of the tufted apple bud moth, Platynota idaeusalis (Walker). Using polyvinyl chloride spirals impregnated with tufted apple bud moth pheromone (1:1 ratio of E11-tetradecenyl alc./E11-tetradecenyl acetate), pheromone rates of ≥1482 spirals per ha (74.1 g pheromone per ha) were superior to a rate of 988 spirals per ha (49.4 g pheromone per ha) in decreasing male response to pheromone traps in 1995, whereas no differences were detected among rates of 988, 1482 and 1975 spirals per ha in 1996. Within a range of 370-988 pheromone dispensers per ha, point source densities were equally effective in suppressing male response to pheromone traps. Pheromone-impregnated paraffin disks were equally effective at inhibiting male response to pheromone traps compared with polyvinyl chloride spirals. However, a paraffin emulsion formulation of pheromone applied with a hand-held grease gun provided longer residual communication disruption effects than polyvinyl chloride spirals. Dilution of paraffin emulsion pheromone formulations in **water** for application with a backpack sprayer and airblast sprayer rendered them ineffective in reducing male response to pheromone traps. The releases of pheromone from polyvinyl chloride spirals and paraffin disks aged in the field were described by a linear and neg. logarithmic curve, resp., indicating that dispenser life time should be longer for spirals. The ratio of acetate to alc. components of pheromone released from spirals increased over time, whereas the release ratio remained more constant for paraffin disks. This suggests that the disruption efficacy of spirals may be prematurely reduced because of imbalance of the released components.

IT **33189-72-9**
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(pheromone application rates and point source densities and dispensing methods for mating disruption of tufted apple bud moth)

REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 4 OF 36 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 19 Dec 1999
ACCESSION NUMBER: 1999:798133 HCAPLUS
DOCUMENT NUMBER: 132:120195
TITLE: Identification and field evaluation of components of female sex pheromone of millet stem borer, Coniesta ignefusalis

AUTHOR(S): Beevor, Peter S.; Youm, Ousmane; Hall, David R.; Cork, Alan
CORPORATE SOURCE: Natural Resources Institute, University of Greenwich, Kent, ME4 4TB, UK
SOURCE: Journal of Chemical Ecology (1999), 25(12), 2643-2663
CODEN: JCECD8; ISSN: 0098-0331
PUBLISHER: Kluwer Academic/Plenum Publishers
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Five active compds. were detected during analyses of ovipositor washings and effluvia from virgin female Coniesta ignefusalis moths by gas chromatog. (GC) linked to electroantennog. (EAG) recording from a male moth. These were identified as (Z)-7-dodecen-1-ol (Z7-12:OH), (Z)-5-decen-1-ol (Z5-10:OH), (Z)-7-dodecenal (Z7-12:Ald), (Z)-7-dodecenyl acetate (Z7-12:Ac), and (Z)-9-tetradecen-1-ol (Z9-14:OH) by comparison of their GC retention times, mass spectra, and EAG activities with those of synthetic stds. Laboratory tests of dispensers for these compds. showed that release rates from polyethylene vials increased to relatively uniform values after three to four days, but release from septa was very rapid and nonuniform and decreased to low levels after two to three days. Trapping tests in Niger showed that the major component, Z7-12:OH, and two of the minor components, Z5-10:OH and Z7-12:Ald, were essential for attraction of male C. ignefusalis moths. The most attractive blend contained these three components in a 100:5:3.3 ratio in a polyethylene vial, which emitted the components in similar proportions to those produced by the female C. ignefusalis moth. **Water** traps baited with this blend containing 1 mg of Z7-12:OH caught more male C. ignefusalis moths than traps baited with newly emerged female moths. Addition of up to 10% of the corresponding E isomers of the pheromone components had no effect on catches, but addition of the other two minor components detected, Z7-12:Ac and/or Z9-14:OH, to the attractive blend at naturally occurring levels caused significant redns. in trap catch.

IT **16974-11-1**, **(Z)-9-Dodecenyl acetate 28079-04-1**, **(Z)-8-Dodecenyl acetate 40642-40-8**, **(Z)-8-Dodecen**-1-ol
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(male millet stem borer response to)

REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 5 OF 36 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 01 Mar 1999
ACCESSION NUMBER: 1999:130923 HCAPLUS
DOCUMENT NUMBER: 130:209433
TITLE: Purification of unsaturated higher aliphatic esters
INVENTOR(S): Fukumoto, Takehiko; Hirokawa, Kazushi; Suzuki, Hiroshi
PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11049723	A2	19990223	JP 1997-214612	19970808
JP 3441630	B2	20030902		

PRIORITY APPLN. INFO.: JP 1997-214612 19970808

AB Title compds., useful as perfumes, agrochems., or insect pheromones (no data), are purified by mixing the compds. with saturated MeOH solns. and/or aqueous solns. of urea in the presence of lower fatty acids or their anhydrides and crystallizing urea adducts. (Z,E)-9,11-tetradecadienyl acetate (I) with 84.6% purity was mixed with MeOH solution of urea and AcOH at 58°, cooled to 5° over 3 h, filtered, and then the filtrate was washed with **H2O** to give I with 93.1% purity.

IT **28079-04-1P**
RL: PUR (Purification or recovery); PREP (Preparation)
(purification of unsatd. higher aliphatic esters as perfumes, agrochems., or insect pheromones)

L17 ANSWER 6 OF 36 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 21 Aug 1998
ACCESSION NUMBER: 1998:524314 HCAPLUS
TITLE: Residues of applied lepidopteran pheromones on commodities--a regulatory hurdle.
AUTHOR(S): Spittler, Terry D.; Leichtweis, Harrison C.; Dennehy, Timothy J.; Kirsch, Phillip
CORPORATE SOURCE: Analytical Laboratories, Cornell University-NYSAES, Geneva, NY, 14456, USA
SOURCE: Book of Abstracts, 216th ACS National Meeting, Boston, August 23-27 (1998), AGRO-046. American Chemical Society: Washington, D. C.
CODEN: 66KYA2
DOCUMENT TYPE: Conference; Meeting Abstract
LANGUAGE: English

AB Chemical pesticide registration regulations in most of the world require extensive toxicity, environmental and residue testing of proposed active ingredients. These definitions included insect pheromone components used to disrupt or confuse mating cycles. Negligible residues were predicted for lepidopteran pheromones used in fruit production In this study, fruits (apples, peaches, grapes) treated with a variety of pheromones were analyzed for their resp. component residues. Fruit samples were blended and extracted with acetone; following the addition of **water**, the analytes were extracted into hexane, concentrated, and adsorbed onto a Florisil Sep-pak. Elution was with 10% acetone/hexane. Chromatog. of Z-9-DDA (**Z-9-Dodecen**-1-ol **Acetate**), Z-11-TDA (**Z-11-Tetradecen**-1-ol **Acetate**) and E-11-TDA (**E-11-Tetradecen**-1-ol **Acetate**) utilized a H-P Model 5890 equipped with a Restek Stabilwax 10 capillary column, 30 m + 0.25 mm + 0.25 μm coating. EZ-3, 13-ODA (**E**-

Z-3, 13-Octadecadien-1-ol **Acetate**) and ZZ-3, 13-ODA (**Z-Z-3 , 13-Octadecadien**-1-ol **Acetate**) were chromatographed on a H-P Model 5890B using a Silar 10C, 50m + 0.25 mm + 0.25 μg column. Detection by HP-MSD Model 5970B was in the selective ion mode. Recoveries were generally 80%, or better, at a min. sensitivity of <5 ppb for all components analyzed. No residues have been detected on any commodity samples, a point cited by the EPA in their exemption of lepidopteran pheromones from tolerance.

L17 ANSWER 7 OF 36 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 30 May 1998
ACCESSION NUMBER: 1998:323365 HCAPLUS
DOCUMENT NUMBER: 129:1659
TITLE: Residue analysis of new pesticides. 3rd communication. Clomazone, cyprodinil, fluquinconazole, pymetrozine, quinoxyfen
AUTHOR(S): Haenel, Ralf; Fischer, Ralf; Siebers, Johannes
CORPORATE SOURCE: Fachgruppe Chemische Mittelpruefung, Biologische Bundesanstalt Land- Forstwirtschaft, Braunschweig, D-38104, Germany
SOURCE: Nachrichtenblatt des Deutschen Pflanzenschutzdienstes (Braunschweig) (1998), 50(5), 118-126
CODEN: NDPBA6; ISSN: 0027-7479
PUBLISHER: Verlag Eugen Ulmer GmbH & Co.
DOCUMENT TYPE: Journal
LANGUAGE: German
AB Physico-chemical data and residue anal. methods are presented for the determination of clomazone, cyprodinil, fluquinconazole, pymetrozine, and quinoxyfen in crops, food of plant and animal origin, soil, **water**, and air including quantification limits and recoveries obtained in fortification expts. Relative retention times and mass spectrometric data are presented.
IT **53120-27-7**
RL: AGR (Agricultural use); ANT (Analyte); PRP (Properties); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(residue anal. of clomazone, cyprodinil, fluquinconazole, pymetrozine, quinoxyfen, and octadecadienylacetate)
IT **7732-18-5, Water**, analysis
RL: AMX (Analytical matrix); ANST (Analytical study)
(residue anal. of clomazone, cyprodinil, fluquinconazole, pymetrozine, quinoxyfen, and octadecadienylacetate)

L17 ANSWER 8 OF 36 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 01 Mar 1997
ACCESSION NUMBER: 1997:134987 HCAPLUS
DOCUMENT NUMBER: 126:140996
TITLE: Semiochemical-containing insecticidal preparation.
INVENTOR(S): Loesel, Peter; Penners, Gunther; Cianciulli-Teller, Maria-G.
PATENT ASSIGNEE(S): Bayer A.-G., Germany
SOURCE: Ger. Offen., 13 pp.
CODEN: GWXXBX

DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19528529	A1	19970206	DE 1995-19528529	19950803
WO 9705778	A1	19970220	WO 1996-EP3220	19960722
W: AU, BB, BG, BR, BY, CA, CN, CZ, HU, JP, KR, KZ, LK, MX, NO, NZ, PL, RO, RU, SK, TR, UA, US				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9667354	A1	19970305	AU 1996-67354	19960722
AU 710396	B2	19990916		
EP 845942	A1	19980610	EP 1996-927569	19960722
EP 845942	B1	20021009		
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, NL, PT				
JP 11510174	T2	19990907	JP 1996-508064	19960722
AT 225604	E	20021015	AT 1996-927569	19960722
ES 2180790	T3	20030216	ES 1996-927569	19960722
PT 845942	T	20030228	PT 1996-96927569	19960722
ZA 9606582	A	19970217	ZA 1996-6582	19960802
US 6395776	B1	20020528	US 1998-356	19980128

PRIORITY APPLN. INFO.: DE 1995-19528529 A 19950803
WO 1996-EP3220 W 19960722

OTHER SOURCE(S): MARPAT 126:140996

AB The preparation comprises a semiochem. (pheromone, kairomone or insect attractant), a UV absorber with low **water** miscibility, an unsatd. oi with low **water** miscibility, and, optionally, pesticides and adjuvants. Thus, a composition contained. E,E-8,10-docadienol, 2-ethylhexyl 2-cyano-3,3-diphenyl-2-propenoate, 2-hydroxy-4-methoxybenzophenone and castor oil.

IT **33956-49-9**, (E,E)-8,10-Dodecadienol
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(semiochem.-containing insecticidal preparation)

L17 ANSWER 9 OF 36 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 17 Jan 1997
ACCESSION NUMBER: 1997:36676 HCAPLUS
DOCUMENT NUMBER: 126:101923
TITLE: Four species of noctuid moths degrade sex pheromone by a common antennal metabolic pathway
AUTHOR(S): Klun, Jerome A.; Potts, William J. E.; Oliver, James E.
CORPORATE SOURCE: Agricultural Research Service, U. S. Department of Agriculture, Beltsville, MD, 20705, USA
SOURCE: Journal of Entomological Science (1996), 31(4), 404-413
CODEN: JESCEP; ISSN: 0749-8004
PUBLISHER: Georgia Entomological Society, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Z-9-tetradecenyl acetate (Z-9-14:OAc) is a component in the female sex pheromones of the cabbage looper, Trichoplusia ni, beet

armyworm, Spodoptera exigua, fall armyworm, Spodoptera frugiperda, and black cutworm, Agrotis ipsilon. The authors compared the in vivo catabolism of Z-9-14:OAc in time course fashion after the tritiated compound was applied topically to the antennae of males in the four species. Catabolism of tritiated European corn borer, Ostrinia nubilalis, sex pheromone (Z-11-14:OAc) was monitored concomitantly so direct comparisons could be made between the make borer and the noctuid males. Results showed that catabolism of pheromone in all four noctuid moths proceeded along the same hydrolysis-alc. oxidation pathway as has been observed in the European corn borer male. Catabolism was math. modeled with first-order differential equations as a four-compartment degradative system in which tritiated pheromonal acetate was sequentially converted to tetradecenol, tetradecenoic acid and **water**. The modeling revealed subtle differences in catabolism from one species to another and that most species exhibited a finite capacity to catabolize the pheromone.

IT **20711-10-8**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(four species of noctuid moths degrade sex pheromone by a common antennal metabolic pathway)

L17 ANSWER 10 OF 36 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 12 Oct 1996
ACCESSION NUMBER: 1996:608098 HCAPLUS
DOCUMENT NUMBER: 126:7440
TITLE: Ruthenium tetraoxide oxidation of alkenes. Part 7. A more complete picture
AUTHOR(S): Albarella, Laura; Piccialli, Vincenzo; Smaldone, Dina; Sica, Donato
CORPORATE SOURCE: Dip. Chim. Organica Biol., Univ. Studi Napoli Federico II, Naples, 80134, Italy
SOURCE: Journal of Chemical Research, Synopses (1996), (9), 400-401
CODEN: JRPSDC; ISSN: 0308-2342
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 126:7440

AB The main reaction products of the RuO4 oxidation of a number of linear and cyclic alkenes, at -70°C in acetone-**water** (5:1) are 1,2-diols, formed in a syn stereospecific manner, and/or α-ketols sometimes accompanied by small amts. of scission products, namely aldehydes and/or carboxylic acids; in some cases, 1,3-dioxolane products, formed by condensation of the 1,2-diol and aldehyde materials, are also obtained.

IT **20711-10-8** **33189-72-9**, trans-11-Tetradecen-1-yl acetate
RL: RCT (Reactant); RACT (Reactant or reagent)
(ruthenium tetraoxide oxidation of alkenes)

L17 ANSWER 11 OF 36 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 06 Sep 1996
ACCESSION NUMBER: 1996:532727 HCAPLUS
DOCUMENT NUMBER: 125:216010

TITLE: Efficient separation of fatty acyl precursors of Spodoptera littoralis sex pheromone by reversed-phase high-performance liquid chromatography
AUTHOR(S): Gosalbo, Laura; Fabrias, Gemma; Camps, Francisco
CORPORATE SOURCE: Dep. Biol. Organic Chemistry, C.I.D.-C.S.I.C., Barcelona, Spain
SOURCE: Archives of Insect Biochemistry and Physiology (1996), 33(1), 75-81
CODEN: AIBPEA; ISSN: 0739-4462
PUBLISHER: Wiley-Liss
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Chromatog. conditions are reported for the efficient separation of fatty acyl precursors of S. littoralis sex pheromone by reversed-phase HPLC. The procedure was optimized with a mixture of phenacyl derivative stds., using an octadecylsilane column, mixts. of acetonitrile-**water**, methanol-**water**, and methanol-isopropanol-**water** as mobile phases, and temperature control. This optimized method allowed the satisfactory separation of phenacyl esters obtained directly from S. littoralis sex pheromone gland exts.

IT **20711-10-8 33189-72-9**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(separation of fatty acyl precursors of Spodoptera sex pheromone by reversed-phase HPLC)

L17 ANSWER 12 OF 36 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 01 Mar 1995
ACCESSION NUMBER: 1995:380428 HCAPLUS
DOCUMENT NUMBER: 122:132837
TITLE: Method for the isomerization of cis-alkenyl compounds.
INVENTOR(S): Terauchi, Takanobu; Sakurada, Toyohisa; Fukumoto, Takehiko; Suzuki, Hiroshi
PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan
SOURCE: Eur. Pat. Appl., 7 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 635467	A1	19950125	EP 1994-111396	19940721
EP 635467	B1	19971015		
R: CH, DE, GB, LI				
JP 07033683	A2	19950203	JP 1993-179528	19930721
JP 3340517	B2	20021105		
US 5532421	A	19960702	US 1994-275753	19940719

PRIORITY APPLN. INFO.: JP 1993-179528 A 19930721
OTHER SOURCE(S): CASREACT 122:132837

AB The invention provides a method for isomerization of cis-alkenyl compds. to their trans isomers, and is useful for preparation of geometrical isomers which are constituents of synthetic pheromones, perfumes, terpenes, etc. The method uses nitric acid as the sole

catalyst. For example, 500 g cis-4-tridecenyl chloride (cis-I) was stirred with 7.5 g nitric acid (expressed as pure HNO3) at 80-85° for 3 h. Washing with aqueous 5% NaOH, then pure **H2O**, and distillation gave a mixture of cis- and trans-I, obtained with 78% isomerization and 99% selectivity. The new method gave nearly identical results for cis-3-hexene, cis-3-heptenol, cis-3-octenyl chloride, oleic acid, and cis-8-dodecenyl acetate. In contrast, known methods using either 2-mercaptoethanol or HCl/NaNO2 gave only 62-65% isomerization and only 93% selectivity. The so-prepared cis/trans-I was used to prepare 4-tridecenyl acetate, the pheromone of Keiferia lycopersicella, with trans/cis ratio 78:22 and purity 98%.

IT **38363-29-0P**, trans-8-Dodecenyl acetate
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(cis/trans-isomerization of alkenyl compds. using nitric acid catalyst)

IT **28079-04-1**, cis-8-Dodecenyl acetate
RL: RCT (Reactant); RACT (Reactant or reagent)
(cis/trans-isomerization of alkenyl compds. using nitric acid catalyst)

L17 ANSWER 13 OF 36 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 24 Jul 1993
ACCESSION NUMBER: 1993:424890 HCAPLUS
DOCUMENT NUMBER: 119:24890
TITLE: Sex pheromone catabolism in the redbanded leafroller moth
AUTHOR(S): Klun, J. A.; Schwarz, M.
CORPORATE SOURCE: Beltsville Agric. Res. Cent., Agric. Res. Serv., Beltsville, MD, 20705, USA
SOURCE: Journal of Chemical Ecology (1993), 19(4), 751-62
CODEN: JCECD8; ISSN: 0098-0331
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Tritium-labeled components of the red-banded leaf-roller (Argyrotaenia velutinana) female sex pheromone, (Z)- and (E)-[11,12-3H2]-11-tetradecenyl acetate (57 Ci/mmol), applied to antennae of males and females were degraded causing formation of tritiated 11-tetradecenol, 11-tetradecenoic acid, and **water**. The catabolic pathway involves acetate hydrolysis, oxidation of alc. to fatty acid, and degradation of the acid via β-oxidation Both geometric isomers were degraded equally well by males but degradation proceeded comparatively less rapidly with female antennae. It is surmised that under natural conditions of olfactory sensing, sex pheromone impinging upon the moth's antennae is probably subject to a similar catabolic fate.

IT **20711-10-8 33189-72-9**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(metabolism of, by red-banded leafroller moth, sex in relation to)

L17 ANSWER 14 OF 36 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 15 Nov 1992
ACCESSION NUMBER: 1992:586678 HCAPLUS

DOCUMENT NUMBER: 117:186678
TITLE: Plastic dispenser for pheromones
INVENTOR(S): Neumann, Ulrich; Buehrle, Hans; Renz, Guenter; Buschmann, Ernst
PATENT ASSIGNEE(S): BASF A.-G., Germany
SOURCE: Eur. Pat. Appl., 11 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 496102	A1	19920729	EP 1991-122072	19911221
EP 496102	B1	19941026		
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, NL				
DE 4101878	A1	19920730	DE 1991-4101878	19910123
ES 2063431	T3	19950101	ES 1991-122072	19911221

PRIORITY APPLN. INFO.: DE 1991-4101878 19910123

AB Small plastic chambers are described for the release of insect-attractant phenomenes. The chambers have a surface/volume ratio of 2-8, preferably 3.7-6.2 cm-1, and a ratio of weight of plastic/chamber volume of ≤1.5, preferably 0.2-0.8 g/mL. The chamber is made of a thermoplastic polymer, preferably polyethylene, polypropylene, polyester, polyamide, or of a biodegradable material, such as poly(hydroxybutyric acid). The chambers are coated with a **water**-soluble pheromone-impervious polymer, such as polyamide, PVA, or polyester. The chambers are secured to a string at 0.5-10.0 m intervals.

IT **16974-11-1**
RL: BIOL (Biological study)
(dispenser for, plastic chamber as)

L17 ANSWER 15 OF 36 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 17 Oct 1992
ACCESSION NUMBER: 1992:549660 HCAPLUS
DOCUMENT NUMBER: 117:149660
TITLE: Exposure, fate and potential residues in food of applied lepidopteran pheromones
AUTHOR(S): Spittler, T. D.; Leichtweis, H. C.; Kirsch, P.
CORPORATE SOURCE: Cornell Anal. Lab., Cornell Univ., Geneva, NY, 14456, USA
SOURCE: BCPC Monograph (1992), 51(Insect Pheromones Other Behav.-Modif. Chem.: Appl. Regul.), 93-108
CODEN: MBCCDO; ISSN: 0306-3941
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Fruits (apples, peaches, grapes) treated with a variety of pheromones were analyzed for their resp. component residues. Fruit samples were blended and extracted with acetone; following the addition of **water**, and analytes were extracted into hexane, concentrated, and adsorbed onto a Florisil Sep-pak. Elution was with 10% acetone/hexane. Chromatog. of Z-9-DDA (**Z-9-dodecen**-1-ol **acetate**), Z-11-TDA (**Z-**

11-tetradecen-1-ol **acetate**) and E-11-TDA (**E-11-tetradecen**-1-ol **acetate**) utilized a H-P Model 5890 equipped with a Restek Stabilwax 10 capillary column, 30 m + 0.25 mm + 0.25 μm coating. Temperature program: 80-130° @ 5°/min, 130-200° @ 4°/min, hold 9 min. Detection by HP-MSD Model 5970B was in the selective ion mode. Retention times were 16.3, 21.1 and 20.9 min, resp. EZ-3,13-ODA (**E-Z-3, 13-octadecadien**-1-ol **acetate**) and ZZ-3,13-ODA (**Z-Z-3,13-octadecadien**-1-ol **acetate**) were chromatographed on a H-P Model 5890B using a Silar 10C, 50 m + 0.25 mm + 0.25 μm column. Temperature program: initial temperature 80 °, hold 2 min; 80°-130° @ 10°/min, hold 15 min. Detection was by HP-MSD Model 5970C operated in the selective ion mode. Retention times were 18.4 and 18.6 min, resp. Recoveries were generally 80%, or better, at a min. sensitivity of <5 ppb for all components analyzed. No residues have been detected on any commodity samples.

L17 ANSWER 16 OF 36 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 11 Jul 1992
ACCESSION NUMBER: 1992:402843 HCAPLUS
DOCUMENT NUMBER: 117:2843
TITLE: Asymmetric microporous polymer beads for controlled release
INVENTOR(S): Smith, Kelly L.; Holmes, Matthew F.; Brooke, James W.
PATENT ASSIGNEE(S): Bend Research, Inc., USA
SOURCE: Eur. Pat. Appl., 13 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 466986	A1	19920122	EP 1990-311027	19901009
EP 466986	B1	19940427		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
CA 2014595	AA	19911012	CA 1990-2014595	19900412
AT 104826	E	19940515	AT 1990-311027	19901009
ES 2053120	T3	19940716	ES 1990-311027	19901009
PRIORITY APPLN. INFO.:			US 1990-547929	19900702
			EP 1990-311027	19901009

AB A controlled release device comprises active ingredient in the pores of a polymeric microporous bead having an anisotropic pore structure of large pores in the interior and small pores at the surface. The gradation of pore sizes between the interior and the surface is continuous. A solution (120 g/L) of polysulfone in DMF was pressurized through a needle into a precipitation bath of 0.5% surfactant solution in **water**. The beads formed were dried and loaded with gossyplure. Other active ingredients are pesticides, drugs, cosmetics, etc.

IT **33956-49-9**, Codlemone

RL: BIOL (Biological study)
(polymer beads containing, for sustained release)

L17 ANSWER 17 OF 36 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 31 May 1992
ACCESSION NUMBER: 1992:211357 HCAPLUS
DOCUMENT NUMBER: 116:211357
TITLE: Biological activity and in vivo degradation of tritiated female sex pheromone in the male European corn borer
AUTHOR(S): Klun, J. A.; Schwarz, M.; Uebel, E. C.
CORPORATE SOURCE: Beltsville Agric. Res. Cent., Agric. Res. Serv., Beltsville, MD, 20705, USA
SOURCE: Journal of Chemical Ecology (1992), 18(3), 283-98
CODEN: JCECD8; ISSN: 0098-0331
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Isomers of [11,12-3H2]-11-tetradecenyl acetate (57 Ci/mM) were synthesized. Behavioral assay of the two compds. using Z- and E-type European corn borer (ECB) males showed that introduction of tritium into the double bond of the pheromone caused a significant isotope effect in the E-type ECB but not in the Z-type ECB. Measurements of tritium associated with the male antennae after a 3-min exposure showed that radioactivity equivalent to 10-17 mol pheromone was adsorbed onto male antennae. Time-course in vivo metabolic studies with picogram amts. of compound applied topically to antennae of E- and Z-type males and Z-type females showed that they metabolized pheromone similarly but females degraded pheromone more slowly than males. Pheromone was hydrolyzed, and the only other major radiolabeled metabolite observed by combined high-pressure and liquid chromatog.-radiodetection was tritiated **water**. Capillary gas chromatog. and radiomonitoring permitted detection of a trace amount of 11-tetradecenoic acid, which indicated that alc. oxidase activity is associated with the antennae. Evidence shows that clearing of pheromone from the ECB male antennae involves hydrolysis and oxidation of the alc. to fatty acid, which in turn is degraded, probably via β-oxidation, to carbon dioxide and **water**.
IT **20711-10-8P**
RL: BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process)
(preparation and isomerization and metabolism by antenna of male European corn borer)
IT **33189-72-9P**
RL: BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process)
(preparation and metabolism by antenna of male European corn borer)

L17 ANSWER 18 OF 36 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 10 Nov 1989
ACCESSION NUMBER: 1989:573597 HCAPLUS
DOCUMENT NUMBER: 111:173597
TITLE: Process for the production of dien-1-ols, 9-hydroxydodec-10-enyl-1-tert-butyl ether, and

its use as an intermediate in the synthesis of 8,10-dodecane dienol

INVENTOR(S): Mackenroth, Wolfgang; Hoelderich, Wolfgang; Becker, Rainer; Seufert, Walter

PATENT ASSIGNEE(S): BASF A.-G., Fed. Rep. Ger.

SOURCE: Eur. Pat. Appl., 11 pp.
CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 305913	A1	19890308	EP 1988-113911	19880826
EP 305913	B1	19910522		
R: AT, BE, CH, DE, ES, FR, GB, IT, LI, NL, SE				
DE 3729225	A1	19890323	DE 1987-3729225	19870902
IL 87478	A1	19920818	IL 1988-87478	19880817
CA 1311502	A1	19921215	CA 1988-575015	19880817
US 4925991	A	19900515	US 1988-235478	19880824
AT 63740	E	19910615	AT 1988-113911	19880826
ES 2028963	T3	19920716	ES 1988-113911	19880826
AU 8821726	A1	19890302	AU 1988-21726	19880901
AU 606202	B2	19910131		
HU 48566	A2	19890628	HU 1988-4525	19880901
HU 200154	B	19900428		
HU 204488	B	19920128	HU 1990-158	19880901
JP 01083032	A2	19890328	JP 1988-218656	19880902
US 4973765	A	19901127	US 1989-453901	19891220

PRIORITY APPLN. INFO.:
DE 1987-3729225 19870902
US 1988-235478 19880824
EP 1988-113911 19880826

OTHER SOURCE(S): CASREACT 111:173597; MARPAT 111:173597

AB R1R2C:CR3CR4:CR5(CR6R7)nOH (R1-R7 = H, C1-12 alkyl; n = 1-14) were prepared from R1R2C:CR3CR4(OH)CHR5(CR6R7)nOCMe3 by treatment with an acid catalyst at elevated temperature Suitable catalyst are H2SO4, tosic acid, etc. The reaction may be carried out in the gas phase at 100-500° using a heterogeneous catalyst or in the liquid phase at 80-180° using a homogeneous catalyst. Thus, crotonaldehyde in THF was added to a -10° solution of BrMg(CH2)8OCMe3 in THF. The mixture was stirred 1 h at -10° to give 77% trans-MeCH:CHCH(OH)(CH2)8OCMe3. The latter was heated with tosic acid to 140° with distillation of **H2O** and then to 170° to give 90% MeCH:CHCH:CH(CH2)7OH.

IT **33956-49-9P**, E,E-8,10-Dodecadienol
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

L17 ANSWER 19 OF 36 HCAPLUS COPYRIGHT 2004 ACS on STN

ED Entered STN: 26 May 1989

ACCESSION NUMBER: 1989:191339 HCAPLUS

DOCUMENT NUMBER: 110:191339

TITLE: Biorational control of crop pests by mating disruption. Residue analyses of **Z-9-dodecen**-1-yl **acetate**

and **Z-11-tetradecen**
-1-yl **acetate** in grapes

AUTHOR(S): Spittler, Terry D.; Leichtweis, Harrison C.; Dennehy, Timothy J.

CORPORATE SOURCE: Anal. Lab., Cornell Univ., Geneva, NY, 14456, USA

SOURCE: ACS Symposium Series (1988), 379(Biotechnol. Crop. Prot.), 430-6
CODEN: ACSMC8; ISSN: 0097-6156

DOCUMENT TYPE: Journal

LANGUAGE: English

AB (**Z**)-**9-Dodecen**-1-yl **acetate** (I) and (**Z**)-**11-tetradecen**-1-yl **acetate** (II), primary components of grape berry moth pheromone, were applied in vineyards via tie-on dispensers for the entire growing season. Mature grapes (100 g) were blended and extracted with acetone; following the addition of **water**, the analytes were extracted into hexane which, after evaporation, was adsorbed onto a Florisil Sep-pak. Elution was with 10% acetone in hexane. Chromatog. was on a Supelcowax 10 capillary column with temperature programming from 80 to 130° at 5°/min then 130 to 200 at 4°/min with a hold 9 min. Detection by HP-MSD Model #5970B was in the selective ion mode at 166 m/e and 194 m/e for I and II, resp. Corresponding retention times were 17.7 and 22.7 min. The sensitivity was <5 ppb for both materials at 80% recovery. Insect control by this biotech. approach was good, and it eliminated the use of traditional chemical pesticides against grape berry moth. No residues were detected in grape berries.

IT **16974-11-1**, (**Z**)-**9-Dodecen**-1-yl **acetate** **20711-10-8**, (**Z**)-**11-Tetradecen**-1-yl **acetate**
RL: ANT (Analyte); ANST (Analytical study)
(determination of, in grapes by gas chromatog.)

L17 ANSWER 20 OF 36 HCAPLUS COPYRIGHT 2004 ACS on STN

ED Entered STN: 17 Feb 1989

ACCESSION NUMBER: 1989:52976 HCAPLUS

DOCUMENT NUMBER: 110:52976

TITLE: Polystyrene carrier for pheromones

INVENTOR(S): Angerer, Winifried; Klimesch, Roger; Parg, Adolf; Sanner, Axel

PATENT ASSIGNEE(S): BASF A.-G., Fed. Rep. Ger.

SOURCE: Ger. Offen., 4 pp.
CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3708297	A1	19880922	DE 1987-3708297	19870314
EP 281918	A2	19880914	EP 1988-103158	19880302
EP 281918	A3	19901017		
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, NL, SE				
US 5163994	A	19921117	US 1988-165304	19880308

JP 63230601 A2 19880927 JP 1988-53876 19880309
PRIORITY APPLN. INFO.: DE 1987-3707692 19870311
DE 1987-3708297 19870314

AB Pheromones are incorporated into a macroporous cross-linked polystyrene matrix. Beads (100-250 μm diameter) were produced by emulsion polymerization of 135 g styrene, 45 g divinylbenzene (containing .apprx.50% ethylbenzene) and 20 g dimethylaminoethyl methacrylate in 1300 mL **water** and 200 mL octane, in the presence of 2 g lauryl peroxide and 1 g poly(vinylpyrrolidone). An agent was prepared by treating 100 g of the above polymer with 100 g of a 1:1 mixture of Z7,Z9- and Z7,E9-hexadecadienyl acetate.

IT **16974-11-1**
RL: BIOL (Biological study)
(pheromone, polystyrene carrier for)

L17 ANSWER 21 OF 36 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 10 Dec 1988
ACCESSION NUMBER: 1988:607719 HCAPLUS
DOCUMENT NUMBER: 109:207719
TITLE: Mass spectra of lepidopterous sex pheromones with a conjugated diene system
AUTHOR(S): Ando, Tetsu; Ogura, Yasushi; Uchiyama, Masaaki
CORPORATE SOURCE: Fac. Agric., Tokyo Univ. Agric. Technol., Tokyo, 183, Japan
SOURCE: Agricultural and Biological Chemistry (1988), 52(6), 1415-23
CODEN: ABCHA6; ISSN: 0002-1369
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Dodecadien-1-ols, tetradecadien-1-ols, and hexadecadien-1-ols with a conjugated (E,E)- or (E)-diene system between the ω1,ω3- and ω5,ω7-positions, their acetates, and aldehyde derivs. (lepidopterous sex pheromones and candidates) were analyzed by electron-impact mass spectrometry, which was operated at 70-eV ionization voltage. Three functional derivs. with a same diene system presented a similar spectral pattern, except for the mol. ions (M+), [M-**H2O**]+ of the alcs., and [M-CH3CO2H]+ of the acetates. Each isomer showed a characteristic fragment ion series of CnH2n-2+ .apprx.CnH2n-5+ (C4.apprx.C9), which reflected the double-bond position in the mol., indicating a method for determining the position of a natural diene pheromone by comparing its mass spectrum with those of the synthetic dienes. By this method, the natural pheromone of Hellula undalis was confirmed to be a ω3,ω5-diene. Furthermore, the fitness indexes proposed by Y. Kuwahara et al. (1986) were calculated for some pheromone components, using the mass spectra of synthetic dienes, to examine the possibilities and limitations for applications of those mass spectra to natural pheromone studies.

IT **33956-49-9**
RL: PRP (Properties)
(mass spectrum of, electron-impact, in lepidopterous sex pheromone study)

L17 ANSWER 22 OF 36 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 13 May 1988
ACCESSION NUMBER: 1988:166969 HCAPLUS

DOCUMENT NUMBER: 108:166969
TITLE: Preparation of (8E,10E)-8,10-dodecadien-1-ol as an insect pheromone
INVENTOR(S): Kalvoda, Ladislav; Vrkoc, Jan
PATENT ASSIGNEE(S): Czech.
SOURCE: Czech., 16 pp.
CODEN: CZXXA9
DOCUMENT TYPE: Patent
LANGUAGE: Czech
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CS 233069	B1	19850214	CS 1983-3157	19830504

PRIORITY APPLN. INFO.: CS 1983-3157 19830504

AB The title compound (I) is prepared from 3-bromo-2-propynyltetrahydropyran (II) by a multistep synthesis. I is useful as a sex pheromone for monitoring and control of Cydia pomonella (no data). II was prepared by reaction of BrMgC.tplbond.CMe and 2,3-dibromotetrahydropyran. The crude II was added to a boiling mixture of **water**, NH4Cl, and powdered Zn. After boiling and stirring for 1 h, the mixture was cooled, and concentrated NH4OH was added. After removal of Zn by filtration and phase separation, the organic layer was concentrated and purified by distillation to give HO(CH2)3CH:CHC.tplbond.CMe. The latter was tosylated and the product treated with MgBr2 in boiling C6H6-Et2O to give Br(CH2)3CH:CHC.tplbond.CMe. Coupling the latter with ClMg(CH2)4OCH2OMe in chilled THF containing Li2CuCL4 and cleaving the CH2OMe group in a boiling mixture of EtOH, (HOCH2)2, and H2SO4 gave HO(CH2)7CH:CHC.tplbond.CMe which was hydrogenated over (AcO)2Ni in EtOH and the resulting (8E,10Z)-HO(CH2)7CH:CHC.tplbond.CMe was isomerized by heating with PhSH at 100° to yield I.

IT **33956-49-9P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as insect pheromone)

L17 ANSWER 23 OF 36 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 31 Oct 1987
ACCESSION NUMBER: 1987:549231 HCAPLUS
DOCUMENT NUMBER: 107:149231
TITLE: Phosphorylated ethylene oxide-propylene oxide-ethylene oxide block copolymer as dispersing agent for pesticide emulsions
INVENTOR(S): Albrecht, Konrad; Heinrich, Rudolf; Schumacher, Hans
PATENT ASSIGNEE(S): Hoechst A.-G. , Fed. Rep. Ger.
SOURCE: Ger. Offen., 5 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

DE 3542439	A1	19870604	DE 1985-3542439	19851130
EP 224846	A1	19870610	EP 1986-116327	19861125
EP 224846	B1	19901003		
R: AT, BE, CH, DE, FR, GB, GR, IT, LI, NL				
AT 57061	E	19901015	AT 1986-116327	19861125
DK 8605734	A	19870531	DK 1986-5734	19861128
DK 174127	B1	20020701		
AU 8665821	A1	19870604	AU 1986-65821	19861128
AU 597314	B2	19900531		
JP 62132801	A2	19870616	JP 1986-282197	19861128
JP 2581682	B2	19970212		
ZA 8609001	A	19870729	ZA 1986-9001	19861128
HU 43228	A2	19871028	HU 1986-4940	19861128
HU 202714	B	19910429		
CA 1285785	A1	19910709	CA 1986-524055	19861128

PRIORITY APPLN. INFO.: DE 1985-3542439 A 19851130
EP 1986-116327 A 19861125

AB Aqueous pesticide emulsions contain α- and ω-phosphorylated ethylene oxide-propylene oxide-ethylene oxide block copolymers or their salts. An emulsion was prepared by adding a mixture of 35% by weight Diclofopmethyl, 18% xylene and 6% fatty acid polyglycol ester to a mixture of 2% K salt of phosphorylated ethylene oxide-propylene oxide-ethylene oxide block copolymer, 10% ethylene glycol and 28% **water.**

IT **33956-49-9**
RL: BIOL (Biological study)
(emulsion of, dispersing agents for, phosphorylated ethylene oxide-propylene oxide-ethylene oxide block copolymers as)

L17 ANSWER 24 OF 36 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 07 Mar 1987
ACCESSION NUMBER: 1987:63772 HCAPLUS
DOCUMENT NUMBER: 106:63772
TITLE: Separation of lepidopterous sex pheromones by reversed-phase thin layer chromatography and high performance liquid chromatography
AUTHOR(S): Ando, Tetsu; Hasegawa, Yuki; Uchiyama, Masaaki
CORPORATE SOURCE: Fac. Agric., Tokyo Univ. Agric. Technol., Tokyo, 183, Japan
SOURCE: Agricultural and Biological Chemistry (1986), 50(11), 2935-7
CODEN: ABCHA6; ISSN: 0002-1369
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The separation of sex pheromonal compds. (C12, C14, and C16 alcs., acetates, and aldehydes) is described by reversed-phase TLC and HPLC. The reversed-phase TLC system consisted of a Merck RP-8F254s plate and MeCN-**H2O** (90:10) as the solvent system. The HPLC system used a Deverosil ODS-5 column with a mobile phase of MeCN-**H2O** (97:3) and a UV detector. Chromatograms of sex pheromonal compds. are presented and the results indicate that reversed-phase TLC and HPLC are useful tools for estimating the chain length and number of double bonds of a pheromone component.

IT **33956-49-9**, (8E,10E)-8,10-Dodecadien-1-ol
RL: ANST (Analytical study)
(separation of, by reversed-phase HPLC and TLC, sex pheromone

components separation in relation to)

IT **38363-29-0, (E)-8-Dodecenyl acetate**
RL: PROC (Process)
(separation of, of sex pheromones by reversed-phase HPLC)

L17 ANSWER 25 OF 36 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 14 Jun 1986
ACCESSION NUMBER: 1986:202331 HCAPLUS
DOCUMENT NUMBER: 104:202331
TITLE: Adhesive composition for controlled-release pheromone preparation
INVENTOR(S): Yamada, Koichiro; Shimakawa, Sakae; Washiyama, Nobumasa; Ogawa, Kinya; Yamamoto, Akira; Nagura, Shigehiro
PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd., Japan; Nisshin Chemical Industry Co., Ltd.
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 60252403	A2	19851213	JP 1984-107729	19840528
JP 03072602	B4	19911119		

PRIORITY APPLN. INFO.: JP 1984-107729 19840528

AB An adhesive for controlled-release pheromone preparation (e.g., microparticles, microcapsules) is formulated from (1) one or more of unsatd. monocarboxylic acid esters, unsatd. dicarboxylic acid esters, and vinyl carboxylates, (2) one or more of polymerizing monomers with CO_2H, glycidyl, alkyl-(un)substituted methylol, OH, NH_2, and $CONH_2$ groups, (3) one or more of polymerizing monomers with vinyl, aryl, methacryl, and sulfonyl groups. The composition allows the controlled-release pheromone preparation to adhere onto the plant by spraying. Thus, a composition containing **Z-11-tetradecenyl acetate** microcapsules in cellulose acetate terephthalate 1, aqueous adhesive (2-ethylhexyl acrylate 70, vinyl acetate 16, methacrylic acid 7, and Na vinylsulfonate 7 parts) 0.6, and **water** 8.4 parts was sprayed onto a polyethylene sheet. The microcapsules adhered onto the sheet by 100%.

IT **20711-10-8**
RL: BIOL (Biological study)
(as pheromone, adhesives for)

L17 ANSWER 26 OF 36 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 22 Sep 1985
ACCESSION NUMBER: 1985:483549 HCAPLUS
DOCUMENT NUMBER: 103:83549
TITLE: Durable controlled release microcapsules
INVENTOR(S): Baker, Richard W.
PATENT ASSIGNEE(S): Bend Research, Inc., USA
SOURCE: Eur. Pat. Appl., 18 pp.
CODEN: EPXXDW

DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 141584	A2	19850515	EP 1984-307158	19841018
EP 141584	A3	19850626		
EP 141584	B1	19880323		
R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
US 4670250	A	19870602	US 1983-544251	19831021
CA 1258622	A1	19890822	CA 1984-465355	19841012
AT 33103	E	19880415	AT 1984-307158	19841018
BR 8405324	A	19850903	BR 1984-5324	19841019
PRIORITY APPLN. INFO.:			US 1983-544251	19831021
			EP 1984-307158	19841018

AB Norporous thermoplastics, such as polysulfones, polycarbonates, and acrylonitrile-styrene copolymer [9003-54-7] are used in the preparation of sustained- and controlled-release microcapsules containing biol. active ingredients. Thus, 2 g Merlon (polycarbonate) [24936-68-3] and 2 g Naled [300-76-5] were dissolved in CH2Cl2, then the solution was emulsified in **H2O** containing 1% gelatin and stirred continuously at 45° to give microcapsules having an insecticidal effect against German cockroach for ≤6 mo.

IT **33956-49-9**
RL: BIOL (Biological study)
(controlled-release microcapsules containing thermoplastics and)

L17 ANSWER 27 OF 36 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 07 Sep 1985
ACCESSION NUMBER: 1985:470782 HCAPLUS
DOCUMENT NUMBER: 103:70782
TITLE: Mass spectra of dodecadienic compounds with a conjugated double bond, lepidopterous sex pheromones
AUTHOR(S): Ando, Tetsu; Katagiri, Yoshio; Uchiyama, Masaaki
CORPORATE SOURCE: Fac. Agric., Tokyo Univ. Agric. Technol., Fuchu, 183, Japan
SOURCE: Agricultural and Biological Chemistry (1985), 49(2), 413-21
CODEN: ABCHA6; ISSN: 0002-1369
DOCUMENT TYPE: Journal
LANGUAGE: English

AB All geometrical isomers of 5,7-, 6,8-, 7,9-, 8,10- and 9,11-dodecadien-1-ols, and their acetates and aldehyde derivs. were analyzed by electron impact mass spectrometry. The abundance of mol. ion (M+) was observed in every spectrum, and the relative intensity of M+ tended to be strong if the compound possessed an (E)-double bond(s). In addition to M+, [M - **H2O**]+ (alcs.) and [M - CH3CO2H]+ (acetates), every dienic compound showed typical series of CnH2n-2+ .apprx. CnH2n-5+ with abundance maximum around C4, C5, C6 or C7. Each double bond positional isomer characteristically yielded different ion peaks in the series, which were useful for its distinction from other isomers. These results indicate that the chemical structure of a natural pheromone of Lepidoptera is easily

deduced successfully by GC-MS anal. if it is a conjugated dienic pheromone.

IT **33956-49-9**
RL: PRP (Properties)
(mass spectra of)

L17 ANSWER 28 OF 36 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 20 Apr 1985
ACCESSION NUMBER: 1985:127364 HCAPLUS
DOCUMENT NUMBER: 102:127364
TITLE: Sustained vapor-releasing body for environmental control
INVENTOR(S): Nagura, Shigehiro; Chiba, Tohru; Niyomura, Katuya; Ogawa, Kinya; Aiba, Noboru; Yamamoto, Akira; Aizawa, Michio
PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd. , Japan
SOURCE: Eur. Pat. Appl., 41 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 131783	A1	19850123	EP 1984-107132	19840620
EP 131783	B1	19890913		
R: DE, GB, IT				
JP 60004111	A2	19850110	JP 1983-110605	19830620
JP 60016914	A2	19850128	JP 1983-124161	19830708
JP 62029056	B4	19870624		
AU 8429471	A1	19850103	AU 1984-29471	19840618
AU 566939	B2	19871105		
CA 1244343	A1	19881108	CA 1984-456814	19840618
BR 8403042	A	19850528	BR 1984-3042	19840620
PRIORITY APPLN. INFO.:			JP 1983-110605	19830620
			JP 1983-124161	19830708

AB A sustained vapor-releasing body capable of emitting a gasifiable and diffusible substance, such as insect pheromones, at a controlled rate was prepared comprising an inert carrier and the gasifiable active substance together with a binder and a film-forming coating layer. Thus, a mixture of 30 parts Aerosil, 30 parts cis-11-tetradecenyl acetate [**20711-10-8**], 2 parts hydroxypropyl cellulose [9004-64-2], and 180 parts EtOH was extruded into beads, then the beads were coated with hydroxypropyl Me cellulose phthalate [9050-31-1]. The rate of emission of the pheromone was constant at 2.1 mg/day during the 1st 40 days. The coated beads had high stability against **water**. Other pheromones used were: cis-11-hexadecenyl acetate [34010-21-4], cis-11-hexadecenyl aldehyde [53939-28-9], cis-7-eicosen-11-one [63408-44-6], cis-8-dodecenyl acetate [**28079-04-1**]. Naphthalene [91-20-3] and α-limonene [138-86-3] were also used as the gasifiable or diffusible substance.

IT **20711-10-8P 28079-04-1P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of sustained-release formulation of)

L17 ANSWER 29 OF 36 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 18 Aug 1984
ACCESSION NUMBER: 1984:452092 HCAPLUS
DOCUMENT NUMBER: 101:52092
TITLE: Biosynthesis of sex pheromone components and glycerolipid precursors from sodium [1-14C]-acetate in redbanded leafroller moth
AUTHOR(S): Bjostad, Louis B.; Roelofs, Wendell L.
CORPORATE SOURCE: Dep. Entomol., New York State Agric. Exp. Stn., Geneva, NY, 14456, USA
SOURCE: Journal of Chemical Ecology (1984), 10(4), 681-91
CODEN: JCECD8; ISSN: 0098-0331
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Na [1-14C]acetate in **water**-DMSO (1:1) was applied topically to sex pheromone glands of Argyrotaenia velutinana. Radiolabel was incorporated into the pheromone components (Z)- and (**E**)-**11-tetradecenyl acetates**, and also into tri- and diacylglycerols, ethanolamine phosphatides, and choline phosphatides. In the triacylglycerols, radiolabel appeared in (Z)- and (E)-11-tetradecenoate, tetradecanoate, hexadecanoate, and octadecanoate. In the choline phosphatides, the same acyl moieties incorporated radiolabel but at lower levels. In the diacylglycerols and ethanolamine phosphatides, only the radiolabel in hexadecanoate and octadecanoate was above the limit of detection. At different times following application of Na [1-14C]acetate, the relative proportions of labeled (Z)- and (**E**)-**11-tetradecenyl acetates** changed very little, but the relative proportions of labeled fatty acyl moieties in the triacylglycerols and choline phosphatides changed markedly. After 8 min, triacylglycerols had incorporated about equal amts. of radiolabel into (Z)- and (E)-11-tetradecenoates and tetradecanoate. As the incubation time was increased, triacylglycerols accumulated proportionately more radiolabeled (E)-11-tetradecenoate, and tetradecanoate. As the incubation time was increased, triacylglycerols accumulated proportionately more radiolabeled (E)- than (Z)-11-tetradecenoate, and accumulated proportionately less radiolabeled tetradecanoate. In the choline phosphatides, at all times of incubation the amount of radiolabel incorporated into (Z)-11-tetradecenoate was small but above the limit of detection, and the amts. of radiolabel in (E)-11-tetradecenoate and tetradecanoate were smaller and often below the limit of detection. In both the triacylglycerols and the choline phosphatides, the relative proportion of radiolabeled hexadecanoate decreased with time, and that of octadecanoate increased.
IT **20711-10-8 33189-72-9**
RL: FORM (Formation, nonpreparative)
(formation of, by redbanded leafroller moth)

L17 ANSWER 30 OF 36 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 12 May 1984
ACCESSION NUMBER: 1984:116487 HCAPLUS
DOCUMENT NUMBER: 100:116487

TITLE: Weather resistant controlled release pheromone preparation
PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 58183601	A2	19831026	JP 1982-67013	19820421

PRIORITY APPLN. INFO.: JP 1982-67013 19820421

AB A pheromone composition is microencapsulated with cellulose derivs. containing carboxyl groups to produce a weather resistant controlled-release product. Thus, a solution of 2 g hydroxypropylmethyl cellulose acetate succinate [71138-97-1] in 40 g 0.3% NaOH was stirred and to this were added 2 g **Z-11-tetradecenyl acetate** [**20711-10-8**], 20 g 20% Na2SO4, and 10 g 3% HCl at 20°. The mixture was stirred for an addnl. 5 min, and microcapsules were filtered off, washed, and air-dried. The pheromone microcapsules were placed in a wind chamber (wind velocity 0.5 m/s) at 30° for 60 days. The pheromone decrease rate was only 5%. Subsequently, the microcapsules were soaked in **water** at 30° for 20 days. No significant changes were observed in the pheromone content.

IT **20711-10-8**
RL: PROC (Process)
(microencapsulation of, with cellulose derivs., as controlled-release pheromone)

L17 ANSWER 31 OF 36 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 12 May 1984
ACCESSION NUMBER: 1983:455385 HCAPLUS
DOCUMENT NUMBER: 99:55385
TITLE: Detergents containing a 1,3-diene group in the hydrophobic segment. Facile chemical modification by a Diels-Alder reaction with hydrophilic dienophiles in aqueous solution
AUTHOR(S): Keana, John F. W.; Guzikowski, Anthony P.; Morat, Claude; Volwerk, Johannes J.
CORPORATE SOURCE: Dep. Chem., Univ. Oregon, Eugene, OR, 97403, USA
SOURCE: Journal of Organic Chemistry (1983), 48(16), 2661-6
CODEN: JOCEAH; ISSN: 0022-3263
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Octaethylene glycol tert-butylcyclopentadienylethyl ether (I) [86217-94-9] (a Triton X-100 analog), dodecadienyl sulfate Na salt (II) [86217-85-8], and dodecadienyl maltoside (III) [86217-86-9] were synthesized. Detergents II and III reacted rapidly with the potent hydrophilic dienophile 4-(2,6-diisopropyl-3-sulfophenyl)-1,2,4-triazoline-3,5-dione Na salt (IV) [86217-87-0] in aqueous solution at 25°, forming Diels-Alder adducts quant. Adducts also

formed readily between I, II, and III and N-(p-sulfophenyl)maleimide Na salt [86238-49-5], although the reaction rate was somewhat slower than that of IV. II led to a stable CHCl3-**water** emulsion while its Diels-Alder adduct did not. Monitoring the enzymic activity of phospholipase A2 [9001-84-7] and chymotrypsin [9004-07-3] as a function of added IV both in the presence and absence of detergents showed that IV reacted preferentially with the 1,3-diene unit of the detergents rather than with the proteins.

IT **33956-49-9**
RL: RCT (Reactant); RACT (Reactant or reagent)
(sulfation of)

L17 ANSWER 32 OF 36 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 12 May 1984
ACCESSION NUMBER: 1982:117531 HCAPLUS
DOCUMENT NUMBER: 96:117531
TITLE: Study on using sex pheromones for the identification of corn borers
AUTHOR(S): Jiang, Zhungxie; Klun, J. A.
CORPORATE SOURCE: Dep. Plant Prot., Henan Coll. Agric., Changsha, Peop. Rep. China
SOURCE: Kunchong Xuebao (1981), 24(4), 356-60
CODEN: KCHPA2; ISSN: 0454-6296
DOCUMENT TYPE: Journal
LANGUAGE: Chinese

AB In Aug. field tests with Asian corn borer and European corn borer pheromones, with different ratios of components, were conducted. The Asian borer sex pheromone (Z)-12-tetradecen-1-ol acetate [35153-20-9], (E)-12-tetradecen-1-ol acetate [35153-21-0], and tetradecyl acetate [638-59-5] at 34:39:27, tested for 11 days, attracted 71 moths and the effect was significant. When European borer sex pheromones (Z) [35153-21-0] and (**E**)-**11-tetradecen**-1-ol **acetate** [**33189-72-9**] at 97:3 and 3:97 were used, only 3 moth were captured with the former and 2 moths were attracted by the later mixture However, European borer sex pheromone (Z) and (**E**)-**11-tetradecen**-1-ol **acetate** at 35:65 captured no moths. Thus, the major corn borers in Xiuchang region of Henan Province are apparently Asian corn borers. Rubber septa impregnated with sex pheromone were more effective than capillaries, and **water**-basin traps were better than using Pherocon traps.

IT **33189-72-9**
RL: BIOL (Biological study)
(corn borer attraction by pheromone component mixts. containing, species identification in relation to)

L17 ANSWER 33 OF 36 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 12 May 1984
ACCESSION NUMBER: 1981:582226 HCAPLUS
DOCUMENT NUMBER: 95:182226
TITLE: Further studies on mating disruption of the red bollworm, Diparopsis castanea Hampson (Lepidoptera: Noctuidae), with a microencapsulated mating inhibitor
AUTHOR(S): Marks, R. J.; Hall, D. R.; Lester, R.; Nesbitt, B. F.; Lambert, M. R. K.

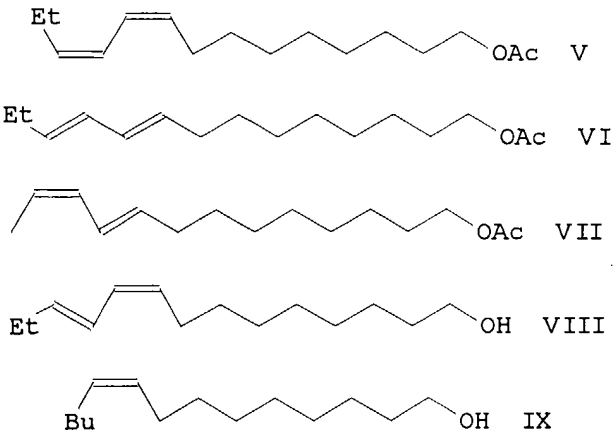
CORPORATE SOURCE: Makoka Res. Stn., Minist. Agric. Nat. Resour., Thondwe, Malawi
SOURCE: Bulletin of Entomological Research (1981), 71(3), 403-18
CODEN: BEREA2; ISSN: 0007-4853
DOCUMENT TYPE: Journal
LANGUAGE: English

AB **Water**-based ultra-low volume (WULV) applications to cotton at four-day intervals of a 1% a.i. polyurea-based microencapsulated formulation of the pheromone inhibitor 9-dodecenyl acetate [35148-19-7] (E/Z 80:20) in a field cage resulted in an average reduction of 60.2% in nightly mating of females of D. castanea. A relatively constant level of inhibitor was maintained by spraying with 30 g/ha initially and decreasing by 10% with each successive spray. Examination of the mated status of 1712 female moths sampled on 88 occasions revealed that, in the presence of inhibitor, mating increased linearly with increasing population d. from 22 to 2844 moths/ha (equal nos. of males and females). In an open-field trial, WULV applications of 30 and 60 g of 1% microencapsulated inhibitor/ha to isolated cotton plots (0.4-1.2 ha) at seven- and 14-day intervals had no disruptive effect on released populations of moths as measured by oviposition and larval infestation of the crop, although there was some reduction in egg fertility and catches of males in pheromone traps in the treated plots. Time-series analyses by gas-liquid chromatog. (GLC) of the residual inhibitor on filter-paper discs and cotton leaves in the field gave similar results, and GLC measurement of inhibitor on filter papers removed at intervals from the test plots showed that inhibitor loss was very rapid, typically 60% within two days and almost 100% after six days. Loss of inhibitor was less rapid in the field cage and under laboratory conditions. Phys. and chemical evaluation of microcapsule deposition on cotton plants revealed that spray droplets penetrated to all parts of the plant but that deposition was greatest on the upper laminae of the top leaves of the plant. Methodol. for assessing the success of mating-disruption expts. is described and discussed, and the failure of the open-field expts. is attributed mainly to the rapid loss of inhibitor from the formulation in the field.

IT **16974-11-1**
RL: BIOL (Biological study)
(mating disruption by microencapsulated, in red bollworm)

L17 ANSWER 34 OF 36 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 12 May 1984
ACCESSION NUMBER: 1981:42586 HCAPLUS
DOCUMENT NUMBER: 94:42586
TITLE: Modification of the attractiveness of the primary pheromone component of the Egyptian cotton leafworm, Spodoptera littoralis (Boisduval) (Lepidoptera:Noctuidae), by secondary pheromone components and related chemicals
AUTHOR(S): Campion, D. G.; Hunter-Jones, P.; McVeigh, L. J.; Hall, D. R.; Lester, R.; Nesbitt, B. F.
CORPORATE SOURCE: Cent. Overseas Pest Res., Overseas Dev. Adm., London, W8 5SJ, UK
SOURCE: Bulletin of Entomological Research (1980),

70(3), 417-34
CODEN: BEREA2; ISSN: 0007-4853
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



AB Known components of the female sex pheromone of S. littoralis, tetradecyl acetate (I) [638-59-5], (Z)-9-tetradecenyl acetate (II) [16725-53-4], (Z,E)-9,11-tetradecadienyl acetate (III) [50767-79-8], and (Z,E)-9,12-tetradecadienyl acetate (IV) [30507-70-1], and related compds. dispensed from polyethylene vials were used to bait **water** traps and funnel traps in lucerne fields. In comparison with the catches of males in traps baited with the primary component,III, alone, catches were increased by the addition of 1-100% of I in relation to the amts. of III, decreased by the addition of >5% II and decreased by the addition of >5% IV. The diene III was more attractive than any of the other 3 geometric isomers, although combining the Z,Z isomer (V) [54664-97-0] or the E,E isomer (VI) [54664-98-1] with III increased catches whereas the addition of the E,Z isomer (VII) [30562-09-5] decreased catches. The alcs. VIII [65726-40-1] and IX [35153-15-2] corresponding to the acetates III and II were not attractive but caused a marked reduction in trap catch when combined with III. The homolog of III (Z,E)-11-methyl-9,11-tetradecadienyl acetate (X) [75888-43-6], was unattractive to males but increased trap catches when combined with III. 9-Tetradecynyl acetate (XI) [53596-75-1] exhibited neither attractant nor inhibitory activity, and similar results were obtained with Et cyclohexane carboxylate (XII) [3289-28-9] and 2-nonynal di-Me acetal (XIII) [13257-44-8], compds. which have similar far-IR spectra to that of diene III. The distributions of males landing on sticky board traps baited with III or mixts. of III with I, II, or IV showed that a greater percentage of the months landed at the periphery of the traps baited with certain combinations of III with I and IV than on traps baited with III alone. Collection and anal. of the volatiles emitted by virgin

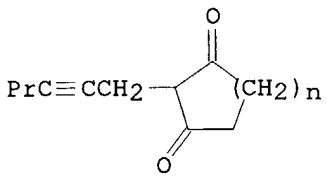
females of different origins indicated that those from Crete produced I and III only, those from Israel produced I, III, and IV, whereas those from Egypt produced I, III, IV, and II and (or) (**E**)-**11-tetradecenyl acetate** [**33189-72-9**]. The results are discussed in relation to previous work on S. littoralis and current theories on insect communication, and also in terms of their relavance to the practical field usage of pheromones to control this pest.

IT **33189-72-9**
RL: BIOL (Biological study)
(as insect attractant component, for Spodoptera littoralis)

L17 ANSWER 35 OF 36 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 12 May 1984
ACCESSION NUMBER: 1977:600799 HCAPLUS
DOCUMENT NUMBER: 87:200799
TITLE: Carboxylic acids
INVENTOR(S): Uchida, Minoru; Matsui, Masanao; Mori, Kenji
PATENT ASSIGNEE(S): Otsuka Pharmaceutical Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 52059110	A2	19770516	JP 1975-136589	19751112
JP 56023413	B4	19810530		

PRIORITY APPLN. INFO.: JP 1975-136589 19751112
GI



II

AB PrC.tplbond.C(CH2)n+3CO2H (I; n = 2-4) were prepared by reductive ring cleavage of II with N2H4.**H2O** in NaOH followed by acidification. Thus, 7.8 g 1,3-cyclohexanedione and 12.4 g PrC.tplbond.CCH2Br were refluxed 7 h with NaOH in MeOH to give 6.0 g II (n = 3), which (7.2 g) and 9 mL 80% N2H4.**H2O** in MeOH was heated 12 h at 125° with 7.8 g powdered NaOH in (HOCH2CH2)2O. The residue was heated 8 h at 195° and cooled. The resulting solid in **H2O** was acidified with HCl and extracted with Et2O to give 4.8 g I (n = 3), which was converted to cis-8-dodecenyl acetate by reduction and acetylation.

IT **28079-04-1P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

L17 ANSWER 36 OF 36 HCAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 22 Apr 2001
ACCESSION NUMBER: 1957:25281 HCAPLUS
DOCUMENT NUMBER: 51:25281
ORIGINAL REFERENCE NO.: 51:4961f-i,4962a-i,4963a
TITLE: Experiments on the synthesis of the pyrethrins. XI. Synthesis of cis-pyrethrolone and pyrethrin I. cis-Penta-2,4-dienyl system by selective hydrogenation
AUTHOR(S): Crombie, L.; Harper, S. H.; Newman, F. C.
CORPORATE SOURCE: Sci. Technol., Imperial Coll., London
SOURCE: Journal of the Chemical Society, Abstracts (1956) 3963-71
CODEN: JCSAAZ; ISSN: 0590-9791
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB cf. C.A. 50, 12847d. The addition of 1 mole H to a monosubstituted vinylacetylene in the presence of Pd catalyst gave a cis vinylic diene. Absorption of H did not stop at this stage, even when poisoned catalysts were used, but continued until the vinyl group was saturated, and yielded a cis monoolefin. With poisoned catalysts, gas absorption then was very slow. The hydrogenations were not completely selective. Intermediates described in the previous paper were used in the synthesis of (±)-cis-pyrethrolone (I), which was found to be identical with pyrethrolone B-2 of natural origin. The final stage in this synthesis involved controlled hydrogenation of a vinylacetylene system to give the cis diene side-chain. Improvements to the synthesis of (±)-trans-pyrethrolone (II) were described. From synthetic I the diastereoisomeric mixture of (+)-cis-pyrethronyl (+)-trans-chrysanthemate (III) and (-)-cis-pyrethronyl (-)-trans-chrysanthemate (IV) was prepared III was natural pyrethrin I. Other insecticidal rethrins having pent-4-en-2-ynyl and hexa-trans-2,trans-4-dienyl side-chains were reported. Catalytic hydrogenations were conducted at room temperature and atmospheric pressure, generally in EtOAc. After filtration, using Filter-Cel, the filtrate was washed (if quinoline was added) with 15% HCl, then **H2O**, dried, and the product distilled Oct-7-en-2-one (V) gave a semicarbazone, plates, m. 112-12.5° (from aqueous alc.). The semicarbazone with aqueous (CO2H)2 regenerated V, b12 66°, nD20 1.4306; 2,4-dinitrophenylhydrazone, m. 65.0-5.5°. Catalytic hydrogenation of V semicarbazone gave octan-2-one semicarbazone (VI), m. and mixed m.p. 124.5°. Catalytic hydrogenation of oct-trans-5-en-2-one semicarbazone, m. 62.5-3.5° gave VI. Oct-7-en-5-yn-2-one (VII) (488 mg.) hydrogenated over Pb-poisoned Pd-CaCO3 (VIII) in the presence of quinoline (IX) to an uptake of 1 mole H, more VIII and IX added to complete the reduction, and the mixture fractionally distilled gave 0.91 g. octa-cis-5,7-dien-2-one (X), b5 62-7°, nD20 1.467-1.473, λ 228 mμ (ε 15,000); semicarbazone, m. 112.5-14°; 2,4-dinitrophenylhydrazone, m. 55.0-5.5°. The structure of X was confirmed by comparison of the infrared spectrum of X with that of an authentic ketone prepared by the elimination of p-toluenesulfonic acid from 8-p-toluenesulfonyloxyoct-cis-5-en-2-one. Hept-6-en-4-ynoic acid (XI) (622 mg.) hydrogenated over VIII with IX to an uptake of 2 moles H in 10 min. gave 500 mg.

slightly impure hept-cis-4-enoic acid (XII), b12 116-16.5°, nD20 1.4426; p-bromophenacyl ester, m. 41-2°. XI (621 mg.) hydrogenated over VIII in the presence of excess IX took up 1 mole H in 15 min. giving 240 mg. hepta-cis-4,6-dienoic acid, b12 122-4°, nD20 1.4749; p-bromophenacyl ester, plates, m. 80-1°. VII treated with NaH in Et2CO3-Et2O gave 44-6% Et 2-oxooct-7-en-5-yne-1-carboxylate (XIII), b0.1 77-85° nD20 1.478-1.483. The consistent b.p. spread may be due to partial separation of oxo and enol forms or to some methylene-C substitution. XIII (11.1 g.) shaken under N with 3% NaOH during 6 hrs. at 20° and set aside overnight at 0° gave 0.3 g. VII identified by conversion to the 2,4-dinitrophenylhydrazone, m. and mixed m.p. 67-8°. AcCHO (7.3 ml.,68% weight/volume) added to the clear alkaline solution of VII, the pH adjusted to 8.5, the mixture kept at 35° and the product distilled gave 4.61 g. 3-hydroxyundec-10-en-8-yne-2,5-dione (XIV), b0.1 115-17°, nD20 1.5035. Acidification of the aqueous liquor and warming to 50° followed by Et2O extraction gave 0.15 g. crude XI; in addition some polymeric material was formed but no hydroxy dione was present.

XIV (8.6 g.) added during 1 hr. to 2 % NaOH containing a trace of quinol and stirred at 10° after 1 hr. further stirring, salt added, and the product isolated gave 3.27 g. (±)-pent-4-en-2-ynylrethrolone (XV), b0.1 128-31°, nD20 1.5520; semicarbazone, needles, when heated blackened without a definite m. or decomposition temperature Catalytic hydrogenation of XV semicarbazone took up 3 moles H giving tetrahydropyrethrolone semicarbazone (XVI), m. 174-5°. XV (0.5 g.) hydrogenated over VIII with 250 mg. IX took up 0.9 mole H giving 200 mg. I, b0.06 120-3°, nD20 1.536. In another reduction over 200 mg. catalyst with 200 mg. IX, the uptake was rapid and the product contained some overhydrogenated material, the semicarbazone, m. 198.5-200° (decomposition), did not depress the m.p. of pyrethrolone B-2 semicarbazone. Et 2-oxooctane-1-carboxylate (44 g.) by similar methods was converted to 3-hydroxyundecane-2,5-dione (XVII). XVII without distillation was cyclized to 12.6 g. (±)-tetrahydropyrethrolone (XVIII), b0.4 134-7°, nD20 1.4901; XVI, prisms, m. 175.5-7.0°.

Material from 2,3-dichlorotetrahydropyran, insol. in H3PO4, was washed with Na2CO3, dried, and fractionally distilled giving a fraction, b14 73.0-3.5° nD20 1.4565, which was mainly 3-chloro-2-ethoxytetrahydropyran (XIX). KOH (100 g.) refluxed 2 hrs. with 150 g. XIX and 400 ml. diethylene glycol yielded 46.5 g. 2-ethoxy-5,6-dihydropyran, b13 50-2° nD20 1.443-1.446. Octa-trans-5,7-dien-2-one formed a semicarbazone as plates, m. 96.5-8.0°. By the above procedure Et 2-oxoocta-trans-5,7-diene-1-carboxylate (13.1 g.) was converted to 3-hydroxyundeca-trans-8,10-diene-2,5-dione (XX), b0.1 112-13° nD20 1.5000. No hydroxy dione was obtained from the extracted liquor on acidification. Cyclization of XX gave 52% II, b0.15 132-4°, nD20 1.5447; semicarbazone, m. 199-200° (decomposition). Catalytic hydrogenation of the semicarbazone over VIII took up 2 moles H and gave XVI. Nona-trans-5,-trans-7-dien-2-one (22.1 g.) was ethoxycarbonylated to Et 2-oxonona-trans-5,trans-7-diene-1-carboxylate (XXI), b0.2 89-99°, nD20 1.478-1.484. XXI (6 g.) was hydrolyzed and treated with 68% aqueous AcCHO to give 3.23 g. 3-hydroxydodeca-trans-8,trans-10-diene-2,5-dione (XXII), b0.4

126-33°, nD20 1.498-1.502. XXII gave an immediate precipitate of dodecatrans-3,trans-8,trans-10-triene-2,5-dionesemicarbazone(XXIII), m. 224-7° (decomposition). XXII (2.9 g.) cyclized to 0.8 g. (±)-sorbylrethrolone (XXIV), b0.2 130-8° nD20 1.539; semicarbazone, m. 210-12° (decomposition). No maleic anhydride adduct could be obtained with XXIV. XV (508 mg.) and 573 mg. (+)-trans-chrysanthemoyl chloride (XXV) in C5H5N-C6H6 heated 1 hr. at 0.05 mm./60° gave 780 mg. (±)-pent-4-en-2-ynylrethronyl (+)-trans-chrysanthemate (XXVI), nD20 1.523. In a similar manner, interaction of 114 mg. I and 133 mg. XXV gave 205 mg. mixed III and IV, nD20 1.514. Likewise XXIV (500 mg.) and 535 mg. XXV gave (±)-sorbylrethronyl (±)-trans-chrysanthemate (XXVII), nD20, 1.517. III, IV, XXVI, and XXVII were prepared for insecticidal assay to be reported elsewhere. Ultraviolet absorption spectra given for: I, II, III, IV, XlII, XIV, XV, XVI, XVIII, XX, XXI, XXII, XXIII, XXIV, XXVI, and XXVII.

(FILE 'MEDLINE, BIOSIS, EMBASE, WPIDS, CONFSCI, SCISEARCH, JICST-EPLUS, JAPIO, RAPRA, PLASNEWS, PROMT, PLASPEC, PIRA, VETU, VETB, CABA, AGRICOLA' ENTERED AT 12:05:18 ON 30 MAR 2004)

L18 27 S L17
L19 18 DUP REM L18 (9 DUPLICATES REMOVED)

L19 ANSWER 1 OF 18 PROMT COPYRIGHT 2004 Gale Group on STN

ACCESSION NUMBER: 2002:620895 PROMT
TITLE: OPD Chemical Buyers Directory 2003: Chemicals & Related Materials. (A: Abrasives - 4-Aminobutyric Acid).(Directory)
SOURCE: Chemical Market Reporter, (29 Oct 2002) pp. 61(22). ISSN: ISSN: 1092-0110.
PUBLISHER: Schnell Publishing Company, Inc.
DOCUMENT TYPE: Newsletter
LANGUAGE: English
WORD COUNT: 11075
FULL TEXT IS AVAILABLE IN THE ALL FORMAT

AB A

L19 ANSWER 2 OF 18 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 2000285920 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10826170
TITLE: Monitoring of the European corn borer (Lepidoptera: Crambidae) in central Maine.
AUTHOR: Ngollo E D; Groden E; Dill J F; Handley D T
CORPORATE SOURCE: Department of Biological Sciences, University of Maine, Orono 04469, USA.
SOURCE: Journal of economic entomology, (2000 Apr) 93 (2) 256-63.
Journal code: 2985127R. ISSN: 0022-0493.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200007
ENTRY DATE: Entered STN: 20000810
Last Updated on STN: 20000810

Searcher : Shears 571-272-2528

Entered Medline: 20000727

AB Pheromone trap types and within-field trap locations were compared for their effectiveness in monitoring the flight activity of European corn borer, Ostrinia nubilalis (Hubner), and its relationship to egg mass density and crop damage in sweet corn in central Maine from 1995 to 1996. The use of both 3:97 Z:**E -11-tetradecenyl acetate** and 97:3 Z:
E-11 tetradecenyl acetate
pheromone blends confirmed that European corn borer in central Maine is attracted to both pheromone lure types. European corn borer moths were captured predominantly with the E-lure type than with the Z-lure type in both years. The Scentry Heliothis trap was more effective than the Multi-Pher trap, but similar to the pheromone-baited **water** pan trap for monitoring European corn borer flights. With the Scentry Heliothis trap, the grassy border and 1st corn rows were the best locations for moth capture during the early flight period, but during the peak flight period, traps located in the middle of the field caught the most moths. Corn damage was recorded before moth captures in some sites and before egg mass counts in others, indicating poor efficacy of traps for early flights. Significant and positive correlations were found between moth captures in the midfield location and egg mass counts, and corn leaf damage, and between egg mass counts and corn leaf damage. However, low coefficients of variation suggest that pheromone trap captures were not good predictors of European corn borer leaf damage in sweet corn.

L19 ANSWER 3 OF 18 PROMT COPYRIGHT 2004 Gale Group on STN

ACCESSION NUMBER: 1999:575152 PROMT
TITLE: EPA approves applications to register pesticide products.
SOURCE: Pesticide & Toxic Chemical News, (26 Aug 1999) Vol. 27, No. 44.
ISSN: 0146-0501.
PUBLISHER: Food Chemical News, Inc.
DOCUMENT TYPE: Newsletter
LANGUAGE: English
WORD COUNT: 338
FULL TEXT IS AVAILABLE IN THE ALL FORMAT

AB EPA issued a notice in the Aug. 4 Federal Register announcing agency approval of the following applications to register pesticide products containing new active ingredients not included in any previously registered products:
THIS IS THE FULL TEXT: COPYRIGHT 1999 CRC Press, Inc.

Subscription: $957 per year as of 1/97. Published weekly. Contact Food Chemical News, Inc., 1101 Pennsylvania Ave. S.E., Washington D.C. 20003. Phone 202-544-1980. Fax 202-546-3890.

L19 ANSWER 4 OF 18 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
ACCESSION NUMBER: 1998:600278 SCISEARCH
THE GENUINE ARTICLE: 106HR
TITLE: Methods for determining the vapour pressure of active ingredients used in crop protection. Part V: Thermogravimetry combined with Solid Phase

MicroExtraction (SPME)

AUTHOR: Krohl T (Reprint); Kastel R; Konig W; Ziegler H; Kohle H; Parg A
CORPORATE SOURCE: BASF AG, CROP PROTECT PROD DEV, D-67114 LIMBURGERHOF, GERMANY (Reprint)
COUNTRY OF AUTHOR: GERMANY
SOURCE: PESTICIDE SCIENCE, (AUG 1998) Vol. 53, No. 4, pp. 300-310.
Publisher: JOHN WILEY & SONS LTD, BAFFINS LANE CHICHESTER, W SUSSEX PO19 1UD, ENGLAND.
ISSN: 0031-613X.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: AGRI
LANGUAGE: English
REFERENCE COUNT: 16

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB The well-established evaporation rate method for determining the vapour pressure of active ingredients in crop protection down to the order of 10(-12) mbar can be supplemented by the new sample preparation technique of Solid Phase MicroExtraction (SPME). With this technique, it is possible to identify evaporating substances by analysis after partitioning into the polymer coating of a thin fibre in the outlet-gas flow of thermogravimetric equipment.

The active ingredients fenpropimorph, kresoxim-methyl, metolachlor, clomazone and **(Z)-9-dodecenyl acetate** were used in this study, which showed that, despite the relatively small amount of collected material, an analytical identification of the evaporating compound by SPME/GC can be successfully achieved. In particular, the experiments have demonstrated a clear correlation between the linearity of the weight loss curve and the evaporation process of a pure compound.

In the case of organic compounds that are unstable to heat, the SPME method can also be utilized to show whether, and at what temperatures, decomposition of the sample into fragments of higher volatility occurs. For example, the insecticide dimethoate showed a clear temperature dependence of both evaporation behaviour and in the SPME/GC analysis. (C) 1998 SCI.

L19 ANSWER 5 OF 18 CABA COPYRIGHT 2004 CABI on STN

ACCESSION NUMBER: 97:101308 CABA
DOCUMENT NUMBER: 19971106949
TITLE: Placement of pheromone traps within the vegetation canopy to enhance capture of male European corn borer (Lepidoptera: Pyralidae)
AUTHOR: Mason, C. E.; Stromdahl, E. Y.; Pesek, J. D., Jr.
CORPORATE SOURCE: Department of Entomology and Applied Ecology, University of Delaware, Newark, NE 19717-1303, USA.
SOURCE: Journal of Economic Entomology, (1997) Vol. 90, No. 3, pp. 795-800. 37 ref.
ISSN: 0022-0493
DOCUMENT TYPE: Journal
LANGUAGE: English
ENTRY DATE: Entered STN: 19970916

Last Updated on STN: 19970916

AB Ostrinia nubilalis pheromone traps are typically placed in the open or above vegetation to monitor adult presence and abundance in areas where adults are likely to aggregate. After noting in another study that more adults were captured in traps overgrown with vegetation than in traps above it, replicated field experiments were conducted at 2 locations in Delaware to determine whether placement of traps within the vegetation was more effective than traps placed above the canopy. At Newark, 3.83 times more males were captured in traps baited with (**Z**)-**11-tetradecenyl acetate** when traps were placed just below the canopy top in mixed weedy vegetation compared with traps 3 m away with the pheromone source 50 cm above the plant canopy. At Laurel in a monoculture of developing wheat, 2.72 times more males were captured in traps baited with (**E**)-**11-tetradecenyl acetate** which were placed below the top of the canopy versus traps above the canopy. Greater variation in adult male captures was associated with greater diversity of the weedy sample location relative to samples in wheat monoculture. Also, traps placed within vegetation resulted in less variation in mean adult captures versus traps placed above the canopy. This indicates that a better estimate of the population may be obtained by placing traps within vegetation. The results suggest that males are more likely to respond to calling females within the vegetation as opposed to above the canopy. Placement of pheromone traps with the pheromone source below the top of the canopy appears to be critical for maximizing their effective capture of adult males of O. nubilalis. It is suggested that enhancement of pheromone lures within vegetation may be caused by **water** vapour and volatiles associated with plants.

L19 ANSWER 6 OF 18 PROMT COPYRIGHT 2004 Gale Group on STN

ACCESSION NUMBER: 93:531507 PROMT
TITLE: TOLERANCE EXEMPTION PROPOSALS PENDING ON DEC. 31, 1992
SOURCE: Pesticide & Toxic Chemical News, (27 Jan 1993) pp. N/A.
ISSN: 0146-0501.
LANGUAGE: English
WORD COUNT: 1947
FULL TEXT IS AVAILABLE IN THE ALL FORMAT

AB ACAL. To exempt from tolerance requirements in or on all raw agricultural commodities. Espro June 10, 1992 (June 17, 1992, Page 11).
ACETIC ACID. To revoke exemptions from tolerance requirements in or on alfalfa, barley grain, bermuda grass, bluegrass, brome grass, clover, corn grain, cowpea hay, soybean hay, sudan grass, timothy, vetch, wheat grain. The revocations would become effective Feb. 28, 1993. EPA proposal Aug. 12, 1992 (Aug. 19, 1992, Page 5).
ADJUVANTS. To exempt from tolerance requirements sodium metabisulfite used as a stabilizer in formulations applied to growing crops. EPA proposal, based on request from Mobay Chemical, published July 18, 1984 (July 25, 1984, Page 7).
ADJUVANTS. To exempt from tolerance requirements methylnaphthalene sulfonic acid-formaldehyde condensate, sodium salt, when used as a

dispersant in formulations applied to growing crops. EPA proposal, based on request from Diamond Shamrock, pub-lished July 18, 1984 (July 25, 1984, Page 7).
ADJUVANTS. To exempt from tolerance requirements acetyl tributyl citrate used as a component of plastic animal tags. EPA pro-posal, based on a request from Alpha Chemical and Plastics, published Aug. 3, 1988 (Aug. 10, 1988, Page 5).
ADJUVANTS. To exempt from tolerance requirements (1) acrylonitrile-butadiene copolymers used as a carrier, (2) FD&C Yellow Number 6 aluminum lake used as a pigment, (3) 2-2'-hydroxy-5'-methylphenyl)benzo-triazole used as an ultraviolet light absorber/ stabilizer, and (4) octadecyl 3,5-di-tert-butyl-4-hydroxyhydrocinnamate used as a thermal stabilizer/antioxidant, with all four for use in ear tags and similar slow-release devices for pesticide formulations applied to animals. EPA proposal, based on a request from Y-Tex Corporation, published Feb. 3, 1989 (Feb. 8, 1989, Page 8).

L19 ANSWER 7 OF 18 CABA COPYRIGHT 2004 CABI on STN
ACCESSION NUMBER: 94:43707 CABA
DOCUMENT NUMBER: 19941103487
TITLE: Sex pheromone catabolism in the redbanded leafroller moth
AUTHOR: Klun, J. A.; Schwarz, M.
CORPORATE SOURCE: Insect Chemical Ecology Laboratory, U.S. Department of Agriculture, Agricultural Research Service, Beltsville Agricultural Research Center, Beltsville, MD 20705, USA.
SOURCE: Journal of Chemical Ecology, (1993) Vol. 19, No. 4, pp. 751-762. 17 ref.
ISSN: 0098-0331
DOCUMENT TYPE: Journal
LANGUAGE: English
ENTRY DATE: Entered STN: 19941101
Last Updated on STN: 19941101

AB Tritium-labelled components of the sex pheromone of females of Argyrotaenia velutinana, (Z)- and (E)-[11,12-[sup3]H2]-11-tetradecenyl acetate (57 Ci/mmol), applied to the antennae of males and females were degraded into tritiated 11-tetradecenol, 11-tetradecenoic acid and **water**. The results indicated that the catabolic pathway involved acetate hydrolysis, oxidation of alcohol to fatty acid and degradation of the acid via [beta]-oxidation. Both geometric isomers were degraded equally well by males, but degradation proceeded comparatively less rapidly with female antennae. It is surmised that under natural conditions of olfactory sensing, sex pheromone impinging upon the antennae was probably subject to a similar catabolic fate.

L19 ANSWER 8 OF 18 JAPIO (C) 2004 JPO on STN
ACCESSION NUMBER: 1988-215602 JAPIO
TITLE: SEX ATTRACTANT FOR TETRAMOERA SCHISTACEANS SHELLEN
INVENTOR: TAMAKI YOSHIO; SUGIE HAJIME; KANESHIRO MIEKO
PATENT ASSIGNEE(S): NORIN SUISANSYO NOGYO KANKYO GIJUTSU KENKYUSHO
PATENT INFORMATION:

PATENT NO	KIND	DATE	ERA	MAIN IPC
JP 63215602	A	19880908	Showa	A01N037-02

APPLICATION INFORMATION
STN FORMAT: JP 1987-46253 19870228
ORIGINAL: JP62046253 Showa
PRIORITY APPLN. INFO.: JP 1987-46253 19870228
SOURCE: PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined Applications, Vol. 1988

AN 1988-215602 JAPIO
AB PURPOSE: To obtain a sex attract for controlling Tetramoera schistaceans Shellen, a major insect pest of sugar cane, comprising a mixture of (**Z**)-**9- dodecenyl acetate** and (E)-9,11-dodecadienyl acetate as an active ingredient.
CONSTITUTION: The titled sex attractant comprising a mixture of Z form of a compound shown by formula I and E form of a compound shown by formula II in a blending ratio of 100:3∼0.3. Since the compounds are effective with an extremely small amount and volatile, preferably the compounds are adsorbed on a carrier (e.g. synthetic high polymer, natural rubber or synthetic rubber) or sealed in a molded article of carrier material and used in the state. The amount of the compounds added is preferably 0.1∼100mg based on 1g carrier. The carrier containing the active ingredient is placed on a container charged with **water**, etc., on a material coated with a proper tacky substance or in the vicinity thereof to attract the aimed insect pest.

L19 ANSWER 9 OF 18 CABA COPYRIGHT 2004 CABI on STN
ACCESSION NUMBER: 87:30291 CABA
DOCUMENT NUMBER: 19870540070
TITLE: Sex pheromone of the podborer, Matsumuraeses falcana (Walshingham) (Lepidoptera: Tortricidae): activity of the third component, (E,Z)-7,9-dodecadienyl acetate, and 3-component formulation
AUTHOR: Wakamura, S.; Kegasawa, K.
CORPORATE SOURCE: Lab. Appl. Entomology, Shikoku National Agric. Exp. Sta., Zentsuji, Kagawa 765, Japan.
SOURCE: Applied Entomology and Zoology, (1986) Vol. 21, No. 2, pp. 334-339. 2 fig. 6 ref.
ISSN: 0003-6862
DOCUMENT TYPE: Journal
LANGUAGE: English
ENTRY DATE: Entered STN: 19941101
Last Updated on STN: 19941101

AB Adult males of Matsumuraeses falcana [M. phaseoli], a pest of soyabeans, were attracted to **water** traps using a 1:1 mixture of (**E**)-**8-dodecenyl acetate** and (8E,10E)-8,10-dodecadienyl acetate in field tests conducted in Shikoku, Japan. The attractancy was significantly increased when (7E,9Z)-7,9-dodecadienyl acetate was added to the 2-component blend, though this synergist attracted no males on its

own. One of the best formulations tested was a rubber septum impregnated with 167 [micro]g of each of these 3 components. It attracted about 1.5 times more males than the septum impregnated with 250 [micro]g of each of the 2 main components, and about 5 times more males than 10 live virgin females. Typical precopulatory behaviour was displayed by males exposed to (7E,9Z)-7,9-dodecadienyl acetate, confirming that it was the 3rd component of the sex pheromone of the tortricid. The other 2 components did not have such sex-stimulatory activity.

L19 ANSWER 10 OF 18 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN DUPLICATE 2

ACCESSION NUMBER: 1986:299078 BIOSIS
DOCUMENT NUMBER: PREV198682032984; BA82:32984
TITLE: EVALUATION OF SAKE-LEES BAIT AS AN ATTRACTANT FOR THE SMALLER TEA TORTRIX MOTH ADOXOPHYES-SP AND TEA TORTRIX MOTH HOMONA-MAGNANIMA.
AUTHOR(S): HORIKAWA T [Reprint author]; SHIRATORI C; SUZUKI T; SONE K; MURAMATSU M
CORPORATE SOURCE: SHIZUOKA TEA EXPERIMENT STN, KIKUGAWA-CHO, OGASE-GUN, SHIZUOKA 439, JPN
SOURCE: Japanese Journal of Applied Entomology and Zoology, (1986) Vol. 30, No. 1, pp. 27-34.
CODEN: NIPTAR. ISSN: 0021-4914.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: JAPANESE
ENTRY DATE: Entered STN: 25 Jul 1986
Last Updated on STN: 25 Jul 1986

AB Sake-lees bait composed of sake lees, distilled spirits and **water** was attractive for both the females and males of the smaller tea tortrix moth (Adoxophyes sp.) and tea tortrix moth (Homona magnanima DIAKONOFF) in the communication disruption tea field with a common sex pheromone component **(Z)-11-tetradecenyl acetate** and in the non-treated tea field. The attractiveness of sake for the two species was not significantly different from that of sake-lees, but distilled spirits, ethyl alcohol and **water** were did not attract two species. Most of the females of the smaller tea tortix moth were trapped from 19:00 to 20:00 and the males from 2:00 to 5:00 in the sake-lees trap. The trapping time of the smaller tea tortrix male by a pheromone trap was mainly from 23:00 to 4:00 in the same field. The sex ratio of the two species captured in the sake-lees trap in the tea fields changed with the trapping methods, the seasons and the fields. The percentage of mating of the female moths of both species caught in the sake-lees trap consistently exceeded 95% in the non-treated field as well as in the disruption field. In the disruption field, however the mating rate of females of both species directly collected in the field was lower than in the non-treated field. It is suggested that mated females are more sensitive to the sake-lees bait than unmated females in both species. Most of the females of both species which were attracted to the sake-lees trap produced a large amount of eggs.

L19 ANSWER 11 OF 18 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN

ACCESSION NUMBER: 1984:307665 BIOSIS
DOCUMENT NUMBER: PREV198478044145; BA78:44145
TITLE: BIOSYNTHESIS OF SEX PHEROMONE COMPONENTS AND GLYCERO LIPID PRECURSORS FROM CARBON-14 LABELED SODIUM ACETATE IN RED-BANDED LEAF-ROLLER MOTH ARGYROTAENIA-VELUTINANA.
AUTHOR(S): BJOSTAD L B [Reprint author]; ROELOFS W L
CORPORATE SOURCE: DEP ENTOMOL, NY STATE AGRIC EXP STN, GENEVA, NY 14456, USA
SOURCE: Journal of Chemical Ecology, (1984) Vol. 10, No. 4, pp. 681-692.
CODEN: JCECD8. ISSN: 0098-0331.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH

AB Sodium [1-14C]acetate in **water**-dimethyl sulfoxide (1:1) was applied topically to sex pheromone glands of A. velutiana. Radiolabel was incorporated into the pheromone components (**Z**)-**11-tetradecenyl acetate** and (**E**)-**11-tetradecenyl acetate**, and also into triacylglycerols, diacylglycerols, ethanolamine phosphatides, and choline phosphatides. In the triacylglycerols, radiolabel appeared in (Z)-11-tetradecenoate, (E)-11-tetradecenoate, tetradecanoate, hexadecanoate and octadecanoate. In the choline phosphatides, the same acyl moieties incorporated radiolabel but at lower levels. In the diacylglycerols and ethanolamine phosphatides, only the radiolabel in hexadecanoate and octadecanoate was above the limit of detection. At different times following application of sodium [1-14C]acetate, the relative proportions of labeled (**Z**)-**11-tetradecenyl acetate** and (**E**)-**11-tetradecenyl acetate** changed very little, but the relative proportions of labeled fatty acyl moieties in the triacylglycerols and choline phosphatides changed markedly. After 8 min, triacylglycerols had incorporated about equal amounts of radiolabel into (Z)-11-tetradecanoate, (E)-11-tetradecenoate and tetradecanoate. As the incubation time was increased, triacylglycerols accumulated proportionately more radiolabeled (E)-11-tetradecenoate than (Z)-11-tetradecenoate, and accumulated proportionately less radiolabeled tetradecanoate. In the choline phosphatides, at all times of incubation the amount of radiolabel incorporated into (Z)-11-tetradecenoate was small but above the limit of detection, and the amounts of radiolabel in (E)-11-tetradecenoate and tetradecanoate were smaller and often below the limit of detection. In both the triacylglycerols and the choline phosphatides, the relative proportion of radiolabeled hexadecanoate decreased with time, and that of octadecanoate increased.

L19 ANSWER 12 OF 18 CABA COPYRIGHT 2004 CABI on STN
ACCESSION NUMBER: 84:68145 CABA
DOCUMENT NUMBER: 19840513714
TITLE: Epigamic behaviour of the cereal pest Cnephasia pumicana (Lepidoptera, Tortricidae) investigated with pheromone traps
AUTHOR: Kontev, C.; Zdarek, J.; Kalvoda, L.
CORPORATE SOURCE: Wheat and Sunflower Research Institute, 9300

Tolbukhin, Bulgaria.
SOURCE: Acta Entomologica Bohemoslovaca, (1984) Vol. 81, No. 2, pp. 90-98. 4 fig. 12 ref.
ISSN: 0001-5601
DOCUMENT TYPE: Journal
LANGUAGE: English
SUMMARY LANGUAGE: Russian
ENTRY DATE: Entered STN: 19941101
Last Updated on STN: 19941101

AB During studies in wheat fields in Bulgaria in 1981-82, a mixture of **(Z)-9-dodecenyl acetate,** (E)-9-dodecenyl acetate and dodecyl acetate at a ratio of 1:1:2 was shown to be an effective sex attractant for males of Cnephasia pumicana (Zell.). A cylindrical sticky trap, a **water** pot trap and a **water** bottle trap were all suitable for population monitoring at moderate densities. The optimum dosage of synthetic pheromone was 1 mg formulated in rubber caps. A well defined circadian rhythm of epigamic activity in both sexes was demonstrated using traps baited with pheromone or a virgin female. The peak of male response to the pheromone occurred about 30 min before sunrise and coincided with the period of female calling. Caged virgin females were attractive to males from the first night after eclosion onwards. Pheromone traps proved useful for determining seasonal distribution; in 1982, the flight period lasted from mid-June to the end of July. The maxima of flight activity coincided with periods of wet weather and low morning temperatures. The curve of seasonal distribution was similar for traps in open wheat fields and adjoining wooded areas, but fewer males were caught in traps in the field than in those in the woods. Most males were captured in the upper canopy of the trees.

L19 ANSWER 13 OF 18 CABA COPYRIGHT 2004 CABI on STN

ACCESSION NUMBER: 84:77354 CABA
DOCUMENT NUMBER: 19840514474
TITLE: Female-baited traps for Ostrinia nubilalis Hb.; addition of synthetic pheromones reduces the attraction
AUTHOR: Maini, S.; Gavioli, F.
CORPORATE SOURCE: Istituto di Entomologia, Universita degli Studi, 40126 Bologna, Italy.
SOURCE: Les mediateurs chimiques agissant sur le comportement des insectes. Symposium international. Versailles, 16-20 novembre 1981, (1982) pp. 391-393. 2 fig.; Colloques de l'INRA no. 7. 5 ref.
Publisher: Institut National de la Recherche Agronomique. Paris
Meeting Info.: Les mediateurs chimiques agissant sur le comportement des insectes. Symposium international. Versailles, 16-20 novembre 1981.
PUB. COUNTRY: France
DOCUMENT TYPE: Conference Article
LANGUAGE: English
ENTRY DATE: Entered STN: 19941101
Last Updated on STN: 19941101

AB Previous laboratory tests indicating that (E)-9-tetradecenyl acetate reduced male response to the stimuli provided by the females of Ostrinia nubilalis Hb. were confirmed by field tests in Bologna, Italy, with **water** traps baited either only with laboratory-reared females of a stock originating from New York or both with females and with different blends of synthetic pheromone components. Fewer males were attracted to the doubly baited traps than to those with females alone, the reduction in attraction of New York females being highly significant when a mixture of (E)-9-tetradecenyl **acetate**, (**E**)-**11**-**tetradecenyl acetate** and (**Z**)-**11**-**tetradecenyl acetate** was used. It is suggested that this mixture might be used to disrupt the mating of O. nubilalis in maize fields.

L19 ANSWER 14 OF 18 CABA COPYRIGHT 2004 CABI on STN

ACCESSION NUMBER:	82:25543 CABA
DOCUMENT NUMBER:	19810587821
TITLE:	Further studies on mating disruption of the red bollworm, Diparopsis castanea Hampson (Lepidoptera: Noctuidae), with a microencapsulated mating inhibitor
AUTHOR:	Marks, R. J.; Hall, D. R.; Lester, R.; Nesbitt, B. F.; Lambert, M. R. K.
CORPORATE SOURCE:	Ministry of Agriculture and Natural Resources, Makoka Research Station, Private Bag 3, Thondwe, Malawi.
SOURCE:	Bulletin of Entomological Research, (1981) Vol. 71, No. 3, pp. 403-418. 5 fig. 11 ref. ISSN: 0007-4853
DOCUMENT TYPE:	Journal
LANGUAGE:	English
ENTRY DATE:	Entered STN: 19941101 Last Updated on STN: 19941101

AB **Water**-based ultra-low volume (WULV) applications to cotton at 4-day intervals of a 1% a.i. polyurea-based microencapsulated formulation of the pheromone inhibitor 9-dodecenyl acetate (E/Z 80:20) in a 0.2-ha field cage in Malawi resulted in an average reduction of 60.2% in nightly mating of females of Diparopsis castanea Hmps. A relatively constant level of inhibitor was maintained by spraying with 30 g/ha initially and decreasing by 10% with each successive spray. Examination of the mated status of 1712 female moths sampled on 88 occasions revealed that, in the presence of inhibitor, mating increased linearly with increasing population density from 22 to 2844 moths/ha (equal numbers of males and females). In an open-field trial, WULV applications of 30 and 60 g of 1% a.i. microencapsulated inhibitor/ha to isolated cotton plots (0.4-1.2 ha) at 7- and 14-day intervals had no measurable disruptive effect on released populations of moths as measured by oviposition and larval infestation of the crop, although there was some reduction in egg fertility and catches of males in pheromone traps in the treated plots. Time-series analyses by gas-liquid chromatography (GLC) of the residual inhibitor on filter-paper discs and cotton leaves in the field gave similar results, and GLC measurement of inhibitor on filter papers removed at intervals from the test plots showed that inhibitor loss was very rapid, typically

60% within 2 days and almost 100% after 6 days. Loss of inhibitor was less rapid in the field cage and under laboratory conditions. Physical and chemical evaluation of microcapsule deposition on cotton plants revealed that spray droplets penetrated to all parts of the plant but that deposition was greatest on the upper laminae of the top leaves of the plant. Methodology for assessing the success of mating-disruption experiments is described and discussed, and the failure of the open-field experiments is attributed mainly to the rapid loss of inhibitor from the formulation in the field.

L19 ANSWER 15 OF 18 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN DUPLICATE 3

ACCESSION NUMBER: 1983:152259 BIOSIS
DOCUMENT NUMBER: PREV198375002259; BA75:2259
TITLE: USING SEX PHEROMONE FOR THE IDENTIFICATION OF CORN BORER.
AUTHOR(S): JIANG Z-X [Reprint author]; KLUN J A
CORPORATE SOURCE: DEP PLANT PROT, HENAN COLL AGRIC
SOURCE: Acta Entomologica Sinica, (1981) Vol. 24, No. 4, pp. 356-360.
CODEN: KCHPA2. ISSN: 0454-6296.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: CHINESE

AB In Aug. 1979, a field test with 1 type of Asian corn borer sex pheromone and 3 types of European corn borer pheromones, using different ratios of mixing components, was conducted in a corn field near by Xiuchang [China]. The Asian borer sex pheromones (Z)-12-tetradecen-1-ol acetate, (E)-12-tetradecen-1-ol acetate and tetradecyl acetate 34:39:27 were tested for 11 days and 71 moths were captured. When European borer sex pheromone (Z)- and (**E**)-**11-tetradecen**-1-ol **acetate** 97:3 and 3:97 were used, only 3 moths were captured for the former and 2 moths were captured for the former and 2 moths were attracted by the latter, indicating these pheromones have some active capacity. European borer sex pheromone (Z)- and (**E**)-**11-tetradecen**-1-ol **acetate** 35:65 captured none of the moths, indicating it has no active capacity. The corn borers in Xiuchang region of Henan Province are mainly Asian corn borers; rubber septa impregnated with sex pheromone has a better effect than those in capillaries and **water**-basin traps were better than Pherocon traps for capturing the moths.

L19 ANSWER 16 OF 18 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN DUPLICATE 4

ACCESSION NUMBER: 1981:147453 BIOSIS
DOCUMENT NUMBER: PREV198171017445; BA71:17445
TITLE: MODIFICATION OF THE ATTRACTIVENESS OF THE PRIMARY PHEROMONE COMPONENT OF THE EGYPTIAN COTTON LEAFWORM SPODOPTERA-LITTORALIS LEPIDOPTERA NOCTUIDAE BY SECONDARY PHEROMONE COMPONENTS AND RELATED CHEMICALS.
AUTHOR(S): CAMPION D G [Reprint author]; HUNTER-JONES P; MCVEIGH L J; HALL D R; LESTER R; NESBITT B F
CORPORATE SOURCE: CENT OVERSEAS PEST RES, OVERSEAS DEV ADM, COLLEGE HOUSE, WRIGHTS LANE, LONDON W8 5SJ, ENGL, UK
SOURCE: Bulletin of Entomological Research, (1980) Vol. 70,

No. 3, pp. 417-434.
CODEN: BEREA2. ISSN: 0007-4853.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH

AB Known components of the female sex pheromone of S. littoralis (Boisd.), tetradecyl acetate (I), (Z)-9-tetradecenyl acetate (IIA), (Z,E)-9,11-tetradecadienyl acetate (III) and (Z,E)-9,12-tetradecadienyl acetate (IV), and related compounds dispensed from polyethylene vials were used to bait **water** traps and funnel traps in lucerne fields in Crete [Greece]. In comparison with the catches of males in traps baited with the primary component (III) alone, catches were increased by the addition of 1-100% of I in relation to the amounts of III, decreased by the addition of 5% or more of IIA and decreased by the addition of more than 5% of IV. The diene III was more attractive than any of the other 3 geometric isomers, although combining the Z,Z isomer (V) or the E,E isomer (VI) with III increased catches while the addition of the E,Z isomer (VII) decreased catches. The alcohols VIII and IX corresponding to the acetates III and IIA were not attractive but caused a marked reduction in trap catch when combined with III. The homolog of III (Z,E)-11-methyl-9,11-tetradecadienyl acetate (X) was unattractive to males but increased trap catches when combined with III. 9-Tetradecynyl acetate (XI) exhibited neither attractant nor inhibitory activity, and similar results were obtained with ethyl cyclohexane carboxylate (XII) and 2-nonynal dimethyl acetal (XIII), compounds which have similar far-IR spectra to that of diene III. The distributions of males landing on sticky board traps 70 cm in diameter baited with III or mixtures of III with I, IIA or IV showed that a greater percentage of the moths landed at the periphery of the traps baited with certain combinations of III with I and IV than on traps baited with III alone. Collection and analysis of the volatiles emitted by virgin females of different origins indicated that those from Crete produced I and III only, those from Israel produced I, III and IV, while those from Egypt produced, I, III, IV and IIA and/or (**E**)-**11-tetradecenyl acetate** (IIB). The results are discussed in relation to previous work on S. littoralis and current theories on insect communication, and in terms of their relevance to the practical field usage of pheromones in control of this pest.

L19 ANSWER 17 OF 18 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN DUPLICATE 5
ACCESSION NUMBER: 1978:151762 BIOSIS
DOCUMENT NUMBER: PREV197865038762; BA65:38762
TITLE: ENVIRONMENT AND SEXUAL ACTIVITY OF THE EUROPEAN CORN BORER.
AUTHOR(S): DEROZARI M B [Reprint author]; SHOWERS W B; SHAW R H
CORPORATE SOURCE: DEP PERHUBANGAN PUSAT METEOROL DAN GEOFIS, JUL AR HAKIM 3 JAKARTA, INDONES
SOURCE: Environmental Entomology, (1977) Vol. 6, No. 5, pp. 657-665.
CODEN: EVETBX. ISSN: 0046-225X.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH

Searcher : Shears 571-272-2528

AB Field studies were conducted to determine the relationship between low-altitude (< 3m) flight and sexual activity of the European corn borer [ECB], Ostrinia nubialis (Huebner), and to delineate the effect of environmental factors on these activities. ECB moths flew out of tall, dense foxtailgrass (Setaria spp.) at 2000-2200 h and moved over short grass where dew had formed. The number of males flying under 3 m was not synchronized with the number of males captured in traps baited with virgin ECB females or the synthetic pheromone, Z:**E-11 tetradecenyl acetate** (96:4 Z:E-11-tda) until after dew or raindrops were deposited on the grass leaves. Free **water** contributed to the aggregation of ECB adults in patches of tall, dense foxtailgrass. Multivariate regressions showed that dew (dewpoint temperature, dewpoint depression, temperature interaction with dewpoint depression) significantly affected the sexual activity of feral males. And even though the caged females (baits) were kept close to **water**, there was a suggestion of a natural dependence on free **water** from dew or rain to stimulate the sexual activity of females. The presence of free **water** is only a condition required for the initiation of sexual activity. Whether this potential is expressed depends on the availability of both sexes (competition) combined with several physical parameters (temperature, relative humidity, illumination). These studies also suggest that low illumination and a slight wind is necessary to provide guidance to the ECB male in mate seeking.

L19 ANSWER 18 OF 18 CABA COPYRIGHT 2004 CABI on STN

ACCESSION NUMBER:	75:32258 CABA
DOCUMENT NUMBER:	19750528169
TITLE:	The behavioural basis of a pheromone monitoring system for pea moth, Cydia nigricana
AUTHOR:	Lewis, T.; Wall, C.; Macaulay, E. D. M.; Greenway, A. R.
CORPORATE SOURCE:	Rothamsted Experimental Station, Harpenden, Herts., UK.
SOURCE:	Annals of Applied Biology, (1975) Vol. 80, No. 3, pp. 257-274. 10 fig. 36 ref. ISSN: 0003-4746
DOCUMENT TYPE:	Journal
LANGUAGE:	English
ENTRY DATE:	Entered STN: 19941101 Last Updated on STN: 19941101

AB The flight and mating behaviour of Cydia nigricana (F.) was studied at overwintering sites and in pea fields in south-eastern England in 1973-74 to see whether it could be exploited to provide early warning of adult immigration into pea crops. The field threshold temperature for take-off was found to be 10 deg C. Most flight activity occurred in June and July between 4 and 6 p.m. (B.S.T.) with peak activity at about 5 p.m. Moths were not caught in suction traps at heights above 0.4 m, but they can probably travel several kilometres by fluttering above vegetation in winds of up to 10 km/h. Female moths produced a sex pheromone highly attractive to males; 'calling' by females and mating occurred during the period of maximum flight activity. Suction traps and egg counts detected the presence of moths in crops at about the same time. On average,

sticky traps and **water** traps containing live virgin females as a lure caught, respectively, 17 and 130 times as many males as suction traps and, on occasions, 25 and 300 times as many; these attractive traps should detect the arrival of immigrants sooner than suction traps or egg counts. Extracts of virgin females dispensed from filter paper at doses of 1 and 5 FE (female equivalents) attracted males rapidly but temporarily. Rubber dispensers with extracts of 20 FE remained attractive for 6 days. Several synthetic attractants were screened at doses of 0.1 mg on rubber dispensers in sticky traps. Cis-8-dodecenyl acetate and **trans-8,trans-10-dodecadienol** at doses of 0.1 mg were slightly attractive; the latter at 1.0 mg was more attractive than 20 FE of extract and could be used for experimental monitoring of C. nigricana until its own synthetic sex pheromone is available.

(FILE 'HCAPLUS, MEDLINE, BIOSIS, EMBASE, WPIDS, CONFSCI, SCISEARCH, JICST-EPLUS, JAPIO, RAPRA, PLASNEWS, PROMT, PLASPEC, PIRA, VETU, VETB, CABA, AGRICOLA, USPATFULL' ENTERED AT 12:19:24 ON 30 MAR 2004)

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L35      19916 S "ANDERSON M"?/AU
L36        405 S "BUDD K"?/AU
L37         37 S "MARABELLA C"?/AU
L38         15 S "NIGATU T"?/AU
L39          4 S L35 AND L36 AND L37 AND L38
L40         24 S L35 AND (L36 OR L37 OR L38)
L41          4 S L36 AND (L37 OR L38)
L42          4 S L37 AND L38
L43          7 S (L40 OR L35 OR L36 OR L37 OR L38) AND (L14 OR L16)
L44          7 S L39 OR L41 OR L42 OR L43
L45          5 DUP REM L44 (2 DUPLICATES REMOVED)
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Author (s)

L45 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 1

ACCESSION NUMBER: 2003:118401 HCAPLUS
DOCUMENT NUMBER: 138:132635
TITLE: Controlled release particles with inorganic matrix
INVENTOR(S): **Anderson, Mark T.; Budd, Kenton D.; Marabella, Charles P.; Nigatu, Tadesse G.**
PATENT ASSIGNEE(S): 3M Innovative Properties Company, USA
SOURCE: U.S. Pat. Appl. Publ., 14 pp., Cont.-in-part of U.S. Ser. No. 838,854, abandoned.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003031694	A1	20030213	US 2001-920689	20010802
WO 2002085113	A1	20021031	WO 2002-US8969	20020322
W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1392115	A1	20040303	EP 2002-764149	20020322
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				

PRIORITY APPLN. INFO.:
US 2001-838854 B2 20010420
US 2001-920689 A 20010802
WO 2002-US8969 W 20020322

AB A particle includes an inorg. matrix that includes channels and a composition disposed in the channels, the composition including organic structure-directing agent and active agent, e.g., pheromone, and the

particle being capable of controllably releasing the active agent.

L45 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 2
ACCESSION NUMBER: 2002:832534 HCAPLUS
DOCUMENT NUMBER: 137:329448
TITLE: Controlled-release particles comprising inorganic matrix
INVENTOR(S): **Anderson, Mark T.; Budd, Kenneth D.; Marabella, Charles P.; Nigatu, Tadesse G.**
PATENT ASSIGNEE(S): 3M Innovative Properties Company, USA
SOURCE: PCT Int. Appl., 38 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002085113	A1	20021031	WO 2002-US8969	20020322
W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003031694	A1	20030213	US 2001-920689	20010802
EP 1392115	A1	20040303	EP 2002-764149	20020322
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				

PRIORITY APPLN. INFO.:
US 2001-838854 A 20010420
US 2001-920689 A 20010802
WO 2002-US8969 W 20020322

AB A particle that includes an inorg. matrix that comprises channels and a composition disposed in the channels, the composition including organic structure-directing agent and active agent, for example, pheromone, and the particle being capable of controllably releasing the active agent are disclosed.

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1975:509751 HCAPLUS
DOCUMENT NUMBER: 83:109751
TITLE: Oak leaf roller (Archips semiferanus) sex pheromone complex. Field and laboratory evaluation of requisite behavioral stimuli
AUTHOR(S): Hendry, L. B.; Jugovich, J.; Mumma, R. O.;

Robacker, D.; Weaver, K.; **Anderson, M. E.**

CORPORATE SOURCE: Dep. Chem., Pennsylvania State Univ., University Park, PA, USA

SOURCE: Experientia (1975), 31(6), 629-31
CODEN: EXPEAM; ISSN: 0014-4754

DOCUMENT TYPE: Journal
LANGUAGE: English

AB Of 21 Z and E tetradecenyl acetate isomers having double bonds in the 2-5 and 7-13 positions, 17 showed attractancy for males of the oak leaf roller (Archips semiferanus) in field trap tests. All isomers evoked response in electroantennogram analyses; however, there was no correlation between the attractancy in field traps and the electroantiennogram response. **Z-11-tetradecenyl acetate** [**20711-10-8**] gave the best male antennal response, but was among the lowest in attracting male oak leaf rollers into the traps. Greatest number of males were caught in traps baited with Z-10- [35153-16-3], Z-5- [35153-13-0], E-4- [56209-67-7], Z-4- [54897-66-4], and Z-3- [54897-65-3] tetradecenyl acetates.

L45 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1975:122040 HCAPLUS
DOCUMENT NUMBER: 82:122040
TITLE: Sex pheromone of the oak leaf roller. Complex chemical messenger system identified by mass fragmentography
AUTHOR(S): Hendry, L. B.; **Anderson, M. E.**; Jugovich, J.; Mumma, R. O.; Robacker, D.; Kosarych, Z.
CORPORATE SOURCE: Dep. Chem., Pennsylvania State Univ., University Park, PA, USA
SOURCE: Science (Washington, DC, United States) (1975), 187(4174), 355-7
CODEN: SCIEAS; ISSN: 0036-8075
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The sex pheromone of the oak leaf roller, Archips semiferanus, is composed of a complex mixture of chemical signals. The attractant component of the pheromone contains a series of tetradecenyl acetates having double bonds in positions 2 to 12. Mass fragmentog. of the ozonolysis products of the attractant component was used to locate the double bonds in the various isomers.

L45 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1975:475328 HCAPLUS
DOCUMENT NUMBER: 83:75328
TITLE: Evidence for origin of insect sex pheromones. Presence in food plants
AUTHOR(S): Hendry, L. B.; Wichmann, J. K.; Hindenlang, D. M.; Mumma, R. O.; **Anderson, M. E.**
CORPORATE SOURCE: Dep. Chem., Pennsylvania State Univ., University Park, PA, USA
SOURCE: Science (Washington, DC, United States) (1975), 188(4183), 59-63
CODEN: SCIEAS; ISSN: 0036-8075

DOCUMENT TYPE: Journal
LANGUAGE: English

AB Compds. identified as sex attractant pheromones in a number of phytophagous insects were found in a variety of host plants. These agents vary in chemical composition in different plant species, which suggests that dietary factors may provide an evolutionary mechanism for diversification of certain insect species. A theor. framework to explain this phenomenon is postulated on the basis of expts. with the oak leaf roller moth.

FILE 'HOME' ENTERED AT 12:24:35 ON 30 MAR 2004